California Regional Water Quality Control Board



requirements.

San Francisco Bay Region

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ORDER NO. R2-2006-0063 NPDES NO. CA0037770

The following Discharger is authorized to discharge in accordance with the conditions set forth in this Order:

Discharger	Mt. View Sanitary District
Name of Facility	Mt. View Sanitary District Wastewater Treatment Plant and its collection system
	3800 Arthur Road
Facility Address	Martinez, CA 94553
	Contra Costa County

The Discharger is authorized to discharge from the following discharge point as set forth below:

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
E-001	Advanced secondary treated, UV disinfected effluent	38°, 01', 12" N	122°, 05', 47" W	Peyton Slough, a tributary to Carquinez Strait

This Order was adopted by the Regional Water Board on:	September 13, 2006	
This Order shall become effective on:	December 1, 2006	
This Order shall expire on:	May 17, 2010	
The U.S. Environmental Protection Agency (US EPA) and the Regional as a major discharge.	Water Board have classified this discharge	
The Discharger shall file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of the Order expiration date as application for issuance of new waste discharge		

IT IS HEREBY ORDERED, that Order No. 00-086 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted therein, and the provisions of the Federal Clean Water Act (CWA), and regulations and guidelines adopted therein, the Discharger shall comply with the requirements in this Order.

I, Bruce H. Wolfe, Executive Officer, do hereby certify the following is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on September 13, 2006.

Bruce H. Wolfe, Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD REGION 2, SAN FRANCISCO BAY REGION

ORDER NO. R2-2006-0063 NPDES NO. CA0037770

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- Standard Provisions and Reporting Requirements, August 1993
- Self-Monitoring Program, Part A, adopted August 1993
- August 6, 2001 Staff Letter: Requirement for Priority Pollutant Monitoring in Receiving Water and Wastewater Discharges
- Resolution 74-10: *Policy Regarding Waste Discharger's Responsibilities to Develop and Implement Contingency Plans*

I. FACILITY INFORMATION

The following Discharger is authorized to discharge in accordance with the conditions set forth in this Order:

Discharger	Mt. View Sanitary District
Name of Facility	Mt. View Sanitary District Wastewater Treatment Plant and its collection system
	3800 Arthur Road
Facility Address	Martinez, CA 94553
	Contra Costa County
Facility Contact, Title, and Phone	David R. Contreras, District Manager, (925) 228-5635 ext. 32
Mailing Address	P. O. Box 2757, Martinez, CA 94553
Type of Facility	POTW
Facility Design Flow	3.2 million gallons per day (mgd)

II. FINDINGS

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter Regional Water Board), finds:

- A. **Background.** Mt. View Sanitary District (hereinafter Discharger) is currently discharging under Order No. 00-086 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0037770. The Discharger submitted a Report of Waste Discharge, dated February 10, 2005, and applied for a NPDES permit renewal to discharge up to 3.2 mgd of treated wastewater from the Mt. View Sanitary District Wastewater Treatment Plant, hereinafter Facility. The application was deemed complete on June 10, 2005.
- B. Facility Description. The Discharger serves an estimated population of 25,000 and approximately 270 businesses in its 4,100 acre-service area. The District owns and operates an 85-mile sewer collection system with four pump stations that bring wastewater to the Facility, an advanced secondary wastewater treatment plant. The Facility's treatment system consists of screening, primary clarifiers, trickling filter, ammonia removal through a biotower, secondary sedimentation, advanced secondary sand filtration, and disinfection by ultra violet irradiation. Treated wastewater is discharged from Discharge Point E-001 to marsh land, and the marsh waters flow (Discharge Point E-001W, as described in the Monitoring and Reporting Program, Attachment E) to Peyton Slough, a water of the United States and a tributary to Carquinez Strait within Suisun Basin. Attachment B provides a topographic map of the area around the Facility. Attachment C provides a flow schematic of the Facility.
- C. **Legal Authorities.** This Order is issued pursuant to section 402 of the Federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (US EPA) and Chapter 5.5, Division 7 of the California Water Code (CWC). It shall serve as a NPDES permit for point source discharges from the Facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4 of the CWC for discharges that are not subject to regulation under CWA section 402.
- D. **Background and Rationale for Requirements**. The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and through special studies. Attachments A through G, which contain background information and rationale for Order requirements, are hereby incorporated into this Order and, thus, constitute part of the Findings for this Order.

- E. California Environmental Quality Act (CEQA). This action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21100, et seq.) in accordance with Section 13389 of the CWC.
- F. **Technology-based Effluent Limitations.** The Code of Federal Regulations (CFR) at 40 CFR §122.44(a) requires that permits include applicable technology-based limitations and standards. This Order includes technology-based effluent limitations based on tertiary treatment or equivalent requirements that meet both the technology-based secondary treatment standards for POTWs and protect the beneficial uses of the receiving waters. The Regional Water Board has considered the factors listed in CWC §13241 in establishing these requirements, or Best Professional Judgment (BPJ) in accordance with 40 CFR §125.3. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment F).
- G. Water Quality-based Effluent Limitations. Section 122.44(d) of 40 CFR requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where numeric water quality objectives have not been established, 40 CFR §122.44(d) specifies that WQBELs may be established using US EPA criteria guidance under CWA section 304(a), proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information, or an indicator parameter.

H. Water Quality Control Plans.

Basin Plan. The Regional Water Board adopted a Water Quality Control Plan for the San Francisco Bay Basin, *Water Quality Control Basin (Region 2)*, (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives (WQOs), and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. The Basin Plan at page 2-5 also states that the beneficial uses of any specifically identified water body generally apply to its tributary streams. The Basin Plan does not specifically identify beneficial uses for Peyton Slough, but does identify present and potential uses for Carquinez Strait, to which Peyton Slough is tributary. In addition, State Water Resources Control Board (State Water Board) Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan. Beneficial uses applicable to Peyton Slough and Carquinez Strait are as follows:

Discharge Point	Receiving Water Name	Beneficial Use(s)
E-001	Peyton Slough, a tributary to Carquinez Strait	Estuarine Habitat (EST), Industrial Service Supply (IND), Fish Migration (MIG), Navigation (NAV), Preservation of Rare and Endangered Species (RARE), Fish Spawning (SPWN), Wildlife Habitat (WILD), Ocean, Commercial and Sport Fishing (COMM), Water Contact Recreation (REC-1), and Non-contact Water Recreation (REC-2).

Thermal Plan. The State Water Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal* and *Interstate Water and Enclosed Bays and Estuaries of California*

(Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for inland surface waters.

Requirements of this Order specifically implement the Basin Plan.

- I. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** US EPA adopted the NTR on December 22, 1992, which was amended on May 4, 1995 and November 9, 1999, and the CTR on May 18, 2000, which was amended on February 13, 2001. These rules include water quality criteria for priority pollutants and are applicable to this discharge.
- J. State Implementation Policy. On March 2, 2000, State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the US EPA through the NTR and to the priority pollutant objectives established by the Regional Water Boards in their basin plans, with the exception of the provision on alternate test procedures for individual discharges that have been approved by US EPA Regional Administrator. The alternate test procedures provision was effective on May 22, 2000. The SIP became effective on May 18, 2000. The State Water Board subsequently amended the SIP, and the amendments became effective on July 31, 2005. The SIP includes procedures for determining the need for and calculating WQBELs and requires dischargers to submit data sufficient to do so.
- K. Compliance Schedules and Interim Requirements. Section 2.1 of the SIP provides that, based on a discharger's request and demonstration that it is infeasible for an existing discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under Section 5.3 of the SIP, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond 10 years from the effective date of the SIP (or May 18, 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation exceeds 1 year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Basin Plan, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement new or revised WQOs. This Order includes compliance schedules and interim effluent limitations. A detailed discussion of the basis for the compliance schedule(s) and interim effluent limitation(s) is included in the Fact Sheet (Attachment F).
- L. Alaska Rule. On March 30, 2000, US EPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes. (40 C.F.R. § 131.21; 65 Fed. Reg. 24641 (April 27, 2000).) Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to US EPA after May 30, 2000, must be approved by US EPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to US EPA by May 30, 2000 may be used for CWA purposes, whether or not approved by US EPA.
- M. **Stringency of Requirements for Individual Pollutants.** This Order contains restrictions on individual pollutants that are no more stringent than required by the federal CWA. Individual pollutant restrictions consist of technology-based restrictions and water quality-based effluent

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> limitations. The technology-based effluent limitations consist of restrictions on biochemical oxygen demand 5-day @ 20°C (BOD₅), total suspended solids (TSS), oil and grease (O&G), and pH. Restrictions on these pollutants are specified in federal regulations and have been in the Basin Plan since before May 30, 2000, as discussed in the attached Fact Sheet, Attachment F. The permit's technology-based pollutant restrictions are no more stringent than required by the CWA. Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to section 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was approved by US EPA on May 18, 2000. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by US EPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to US EPA prior to May 30, 2000, but not approved by US EPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to section 131.21(c)(1). The remaining water quality objectives and beneficial uses implemented by this Order (specifically Arsenic, Cadmium, Chromium (VI), Copper (freshwater), Lead, Nickel, Silver (1-hour), and Zinc) were approved by US EPA on January 5, 2005, and are applicable water quality standards pursuant to section 131.21(c)(2). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes of the CWA.

- N. **Antidegradation Policy.** Section 131.12 of 40 CFR requires that State water quality standards include an antidegradation policy consistent with the Federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16, which incorporates the requirements of the Federal antidegradation policy. Resolution 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. As discussed in detail in the Fact Sheet (Attachment F), the permitted discharge is consistent with the antidegradation provision of 40 CFR §131.12 and State Water Board Resolution 68-16.
- O. Anti-Backsliding Requirements. Sections 402(o)(2) and 303(d)(4) of the CWA and Federal regulations at 40 CFR § 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. Some effluent limitations in this Order are less stringent that those in the previous Order. As discussed in detail in the Fact Sheet (Attachment F) this relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and Federal regulations.
- P. **Monitoring and Reporting.** Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWC authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement Federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.

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- Q. **Standard and Special Provisions.** Standard Provisions, which in accordance with 40 CFR §§122.41 and 122.42, apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachment D. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet (Attachment F).
- R. **Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet (Attachment F) of this Order
- S. Consideration of Public Comment. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet (Attachment F) of this Order.

III.DISCHARGE PROHIBITIONS

- A. Discharge of any wastewater at a location or in a manner different from that described in this Order is prohibited.
- B. The bypass of untreated or partially treated wastewater to waters of the State, either at the Facility or from the collection system or pump stations tributary to the Facility, is prohibited, except as provided for bypasses under the conditions stated in 40 CFR 122.41(m)(4), in A.12 of the *Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits*, *August 1993* (Attachment G) of this Order.
- C. Average dry weather flows greater than 3.2 MGD are prohibited. The average dry weather flow shall be determined over three consecutive dry weather months each year.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point E-001

1. Final Effluent Limitations

a. The discharge of treated wastewater shall maintain compliance with the following effluent limitations at Discharge Point E-001, with compliance measured at Monitoring Location E-001 as described in the attached Monitoring and Reporting Program (Attachment E):

		Effluent Limitations				
Parameter	Units ^[1]	Average	Average	Maximum	Instantaneous	Instantaneous
		Monthly	Weekly	Daily	Minimum	Maximum
BOD ₅	mg/L	30	45			
TSS	mg/L	30	45			
O&G	mg/L	10		20		-
$pH^{[2]}$	standard units			I	6.5	8.5
Mercury	μg/L	0.021		0.038		-
Copper	μg/L	8.3		11.4		
Cyanide ^[3]	ug/I	0.42		1.0		
Effective Starting: April 28, 2010	μg/L	0.42		1.0		

Table Footnotes:

[1] Unit Abbreviations:

mg/L = milligrams per liter $\mu g/L$ = micrograms per liter

^[2] pH

If the Discharger employs continuous monitoring, then the Discharger shall be in compliance with the pH limitation specified herein, provided that both of the following conditions are satisfied:

- The total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and
- 2) No individual excursion from the range of pH values shall exceed 60 minutes.

[3] Alternate Final Cyanide Effluent Limitation.

If a cyanide site-specific water quality objective (SSO) for the receiving water becomes legally effective, resulting in adjusted saltwater criteria CCC of 2.9 µg/L, based on the assumptions in *Draft Staff Report on Proposed Site-Specific Water Quality Objectives and Effluent Limit Policy for Cyanide for San Francisco Bay*, dated November 10, 2005, upon its effective date, the following limitations shall supercede those cyanide limitations, above (the rationale for these effluent limitations can be found in the Fact Sheet [Attachment F]).

Monthly Average of 8.8 µg/L, and Maximum Daily of 21 µg/L

If a different cyanide SSO for the receiving water is adopted, the alternate WQBELs based on the SSO will be determined after the SSO effective date.

b. **Total ammonia:** The treated wastewater shall not exceed the following effluent limits of total ammonia:

Monthly Average of 8 mg/L, and Annual Average of 6 mg/L.

- c. **85 Percent Removal, BOD**₅ and TSS: The arithmetic mean of the BOD₅, and TSS values, by concentration, for effluent samples collected in each calendar month shall not exceed 15 percent of the arithmetic mean of the respective values for influent samples collected at approximately the same times during the same period.
- d. **Total Coliform Bacteria:** The treated wastewater, at some place in the treatment process prior to discharge, shall meet the following limits of bacteriological quality:
 - (1) During Dry Weather months, June 1st through October 31st:
 - i. The moving median value for the Most Probable Number (MPN) of total coliform bacteria in any five consecutive samples shall not exceed 23 MPN/100 ml; and,
 - ii. Any single sample shall not exceed 240 MPN/100 ml.

- (2) During Wet Weather months, November 1st through May 31st, if any samples are taken on days when the average daily flows exceed 1.85 mgd, (dry weather average daily flow from May 2003 through October 2005), then:
 - i. The moving median value for the MPN of total coliform bacteria in any five consecutive samples shall not exceed 240 MPN/100 ml, and
 - ii. Any single sample shall not exceed 10,000 MPN/100ml.
- e. **Whole Effluent Acute Toxicity:** Representative samples of the discharge at Discharge Point E-001 shall meet the following limits for acute toxicity. Compliance with these limits shall be achieved in accordance with Section V.A of the attached MRP (Attachment E):
 - 1) The survival of bioassay test organisms in 96-hour flow-through bioassays of undiluted effluent shall be:
 - a) An eleven (11)-sample median value of not less than 90 percent survival; and
 - b) An 11-sample 90th percentile value of not less than 70 percent survival.
 - 2) These acute toxicity limits are further defined as follows:
 - a) 11-sample median limit:
 Any bioassay test showing survival of 90 percent or greater is not a violation of this limit. A bioassay test showing survival of less than 90 percent represents a violation of this effluent limit, if five or more of the past ten or fewer bioassay tests also show less than 90 percent survival.
 - b) 90th percentile limit:
 Any bioassay test showing survival of 70 percent or greater is not a violation of this limit. A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit, if one or more of the past ten or fewer bioassay tests also show less than 70 percent survival.

2. Interim Effluent Limitation, E-001 – Cyanide

During the period beginning the effective date of this Order and ending on April 27, 2010, or until the Regional Water Board amends the limitation based upon the cyanide SSO, the discharge of treated wastewater shall maintain compliance with the following limitation at Discharge Point E-001 with compliance measured at Monitoring Location E-001 as described in the attached MRP (Attachment E). This interim effluent limitation shall apply in lieu of the corresponding final cyanide effluent limitation specified for the time period indicated above.

Parameter	Units	Maximum Daily
Cyanide	μg/L	5.5

B. Land Discharge Specifications – N/A

C. Reclamation Specifications – Marsh and Wetland Specifications

1. **Marsh Operation.** The Regional Water Board expects the Discharger to operate and maintain the marsh without chemical treatment (i.e., herbicides and algaecides) and to

implement all feasible measures prior to using chemical treatment. If chemical treatment is proposed by the Discharger, then such treatment shall be in accordance with the provisions of State general permits CAG990004 (Discharge of Aquatic Pesticides to Surface Water for Vector Control) and CAG990005 (Discharge of Aquatic Pesticides for Weed Control to Waters of the United States), and the Basin Plan.

2. **Marsh Management Plan.** Within 365 days of the effective date of this Order, the Discharger shall review and update its Marsh Management Plan, as appropriate to ensure compliance with receiving water limitations in section V. of this Order. At a minimum, this review shall include a proposal for continuously monitoring the marsh for salinity, dissolved oxygen, temperature, and pH. The Discharger shall also 1) include a map identifying the monitoring locations, 2) propose the frequency of monitoring at each location, and 3) develop an implementation schedule, as appropriate.

The Discharger shall describe in a separate section of its annual self-monitoring report, the results of its annual review of marsh management processes, and include an estimated time schedule for updating its marsh management plan to document any revisions in marsh management implemented in the previous year.

3. **Marsh Contingency Plan.** The Discharger shall continue to implement the following approved programs/plans: (a) a Marsh Contingency Plan for the protection of marsh and Bay during contingency operations, (b) a program to minimize public contact with the treated wastewater, and (c) a special receiving water monitoring plan and program to assess impacts on nearshore biota.

Annually, the Discharger shall review and update as necessary, its Marsh Contingency Plan. The discharge of pollutants in violation of this Order where the Discharger has failed to develop and/or adequately implement a contingency plan will be the basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code. Plan revisions, or a letter stating that no changes are needed, shall be included in a separate section of the Discharger's annual self-monitoring report.

V. RECEIVING WATER LIMITATIONS

- **A. Surface Water Limitations.** Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. The discharge shall not cause the following in Peyton Slough:
 - 1. The discharge shall not cause the following conditions to exist in waters of the State at any place:
 - a. Floating, suspended, or deposited macroscopic particulate matter or foam;
 - b. Bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses;

- c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
- Visible, floating, suspended, or deposited oil or other products of petroleum origin;
 and
- e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on wildlife, waterfowl, or other aquatic biota, or which render any of these unfit for human consumption, either at levels created in the receiving waters or as a result of biological concentration.
- 2. The discharge shall not cause nuisance, or adversely affect the beneficial uses of the receiving water.
- 3. The discharge of waste shall not cause the following limits to be exceeded in waters of the State at any place within one foot of the water surface:
 - a. Dissolved Oxygen: 5.0 mg/L, minimum

The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation. When natural factors cause concentrations less than that specified above, the discharge shall not cause further reduction in ambient dissolved oxygen concentrations.

- b. Dissolved Sulfide: 0.1 mg/L, maximum
- c. pH: Variation from normal ambient pH by more than 0.5 pH units.
- d. Un-ionized Ammonia: 0.025 mg/L as N, annual median; and 0.16 mg/L as N, maximum.
- e. Nutrients: Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
- 4. The discharge shall not cause a violation of any particular water quality standard for receiving waters adopted by the Regional Water Board or the State Water Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Regional Water Board may reopen and modify this Order in accordance with such more stringent standards.

B. Groundwater Limitations – N/A

VI. PROVISIONS

A. Standard Provisions

- 1. **Federal Standard Provisions.** The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.
- 2. **Regional Water Board Standard Provisions.** The Discharger shall comply with all applicable items of the attached *Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits, August 1993* (the Standard Provisions, Attachment G), including amendments thereto. Where provisions or reporting requirements specified in this Order are different from equivalent or related provisions or reporting requirements given in the Standard Provisions, the specifications of this Order shall apply. Duplicative requirements in the federal Standard Provisions in VI.A.1.2, above (Attachment D) and the regional Standard Provisions (Attachment G) are not separate requirements. A violation of a duplicative requirement does not constitute two separate violations.
- **B.** Monitoring and Reporting Program Requirements. The Discharger shall comply with the Monitoring and Reporting Program (MRP), and future revisions thereto, in Attachment E of this Order. The Discharger shall also comply with the requirements contained in Self-Monitoring Program, Part A (August 1993) (Attachment G), including any amendments thereto.

C. Special Provisions

- 1. **Reopener Provisions.** The Regional Water Board may modify or reopen this Order prior to its expiration date in any of the following circumstances as allowed by law:
 - a. If present or future investigations demonstrate that the discharge(s) governed by this Order will, or cease to, have adverse impacts on water quality and/or beneficial uses of the receiving waters.
 - b. If new or revised WQOs come into effect, or following the completion of TMDLs and WLAs, for the San Francisco Bay estuary and contiguous water bodies (whether statewide, regional, or site-specific). In such cases, effluent limitations in this Order will be modified as necessary to reflect updated WQOs, or the WLA in the TMDL.
 - c. If translator or other water quality studies provide new information and a basis for determining that a permit condition(s) should be modified.
 - d. If an administrative or judicial decision on a separate NPDES permit or WDR that addresses requirements similar to this discharge.
 - e. Or as authorized by law.

The Discharger may request permit modification based on the above. The Discharger shall include in any such request an antidegradation and antibacksliding analysis, if applicable.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. **Effluent Characterization for Selected Constituents.** The Discharger shall continue to monitor and evaluate the discharge from Discharge Point E-001, measured at Monitoring Location E-001, for the constituents listed in Enclosure A of the Regional Water Board's August 6, 2001 Letter, according to the sampling frequency specified in the attached MRP (Attachment E). Compliance with this requirement shall be achieved in accordance with the specifications stated in the Regional Water Board's August 6, 2001 Letter under Effluent Monitoring for Major Dischargers.

The Discharger shall evaluate on an annual basis if concentrations of any constituent increase over past performance. Furthermore, if that increase would result in reasonable potential to cause or contribute to an excursion above applicable WQO/WQC for constituents without effluent limitations in this Order, the Discharger shall investigate the cause of the increase, which may include but is not limited to an increase in the effluent monitoring frequency, monitoring of internal process streams, and monitoring of influent sources. This may be satisfied through identification of these constituents as "Pollutants of Concern" in the Discharger's Pollutant Minimization Program described in Provision C.3 below. A summary of the annual evaluation of data, and source investigation activities shall also be reported in the annual self-monitoring report.

A final report that presents all the data shall be submitted to the Regional Water Board no later than 180 days prior the Order expiration date. This final report shall be submitted with the application for permit reissuance.

b. Ambient Background Receiving Water Monitoring. The Discharger shall continue to collect or participate in collecting background ambient receiving water data with other dischargers and/or through the Regional Monitoring Program. This information is required to perform RPAs and to calculate effluent limitations. To fulfill this requirement, the Discharger shall submit (or cause to have submitted on its behalf) data sufficient to characterize the concentration of each toxic pollutant listed in the CTR in the ambient receiving water. The data on the conventional water quality parameters (pH, salinity, and hardness) shall also be sufficient to characterize these parameters in the ambient receiving water at a point after the discharge has mixed with the receiving waters. This provision may be met through monitoring through the Collaborative BACWA Study, or a similar ambient monitoring program for San Francisco Bay. This permit may be reopened, as appropriate, to incorporate effluent limits or other requirements based on Regional Water Board review of these data.

Final Report: The Dischargers shall submit a final report that presents all the data to the Regional Water Board 180 days prior to Order expiration. This final report shall be submitted with the application for permit reissuance.

c. **Optional Mass Offset.** If the Discharger can demonstrate that further net reductions of the total mass loadings of the 303(d)-listed pollutants to the receiving water cannot be achieved through economically feasible measures such as aggressive source control, feasibility studies for wastewater reuse, and treatment plant optimization, but only through a mass offset program, the Discharger may submit to the Regional Water Board

for approval a mass offset plan to reduce 303(d)-listed pollutants to the same watershed or drainage basin. The Regional Water Board may modify this Order to allow an approved mass offset program.

d. Status Report on 303(d)-Listed Pollutants, Site-Specific Objectives (SSOs) and TMDL. By January 31 of each year, the Discharger shall submit an update to the Regional Water Board to document its participation efforts toward development of the TMDL(s) or SSO(s). The Discharger can submit updates through the regional Bay Area Clean Water Agencies (BACWA) studies for these pollutants. These status reports must address, but not be limited to, the efforts in support of the SSO or TMDL for copper, cyanide, and dioxin-TEQ.

3. Best Management Practices and Pollution Minimization

- a. The Discharger shall continue to implement and improve, in a manner acceptable to the Executive Officer, its existing Pollutant Minimization Program to reduce pollutant loadings of cyanide, copper, and dioxin-TEQ to the treatment plant and therefore to the receiving waters. The Discharger shall implement any applicable additional pollutant minimization measures described in the Basin Plan's implementation requirements associated with the cyanide SSO if and when it becomes effective and the alternate limit takes effect.
- b. The Discharger shall submit an annual report on pollution minimization measures, acceptable to the Executive Officer, no later than August 30th of each year. Annual reports shall cover July through June of the preceding year. Annual reports shall include at least the following information:
 - 1) A brief description of its treatment facilities and treatment processes.
 - 2) A discussion of the current pollutants of concern. Periodically, the Discharger shall analyze its own situation to determine which pollutants are currently a problem and/or which pollutants may be potential future problems. This discussion shall include the reasons why the pollutants were chosen.
 - 3) *Identification of sources for the pollutants of concern*. This discussion shall include how the Discharger intends to estimate and identify sources of the pollutants. The Discharger shall also identify sources or potential sources not directly within the ability or authority of the Discharger to control, such as pollutants in the potable water supply and air deposition.
 - 4) Identification of tasks to reduce the sources of the pollutants of concern. This discussion shall identify and prioritize tasks to address the Discharger's pollutants of concern. The Discharger may implement tasks itself or participate in group, regional, or national tasks that will address its pollutants of concern. The Discharger is strongly encouraged to participate in group, regional, or national tasks that will address its pollutants of concern whenever it is efficient and appropriate to do so. A time-line shall be included for the implementation of each task.
 - 5) *Outreach to employees*. The Discharger shall inform employees about the pollutants of concern, potential sources, and how they might be able to help reduce the discharge of these pollutants of concern into the treatment facilities. The Discharger may provide a forum for employees to provide input to the Program.

- 6) Continuation of Public Outreach Program. The Discharger shall prepare a public outreach program to communicate pollution prevention to its service area. Outreach may include participation in existing community events such as county fairs, initiating new community events such as displays and contests during Pollution Prevention Week, conducting school outreach programs, conducting plant tours, and providing public information in newspaper articles or advertisements, radio or television stories or spots, newsletters, utility bill inserts, and its web site. Information shall be specific to the target audiences. The Discharger shall coordinate with other agencies as appropriate.
- 7) Discussion of criteria used to measure the program's and tasks' effectiveness. The Discharger shall establish criteria to evaluate the effectiveness of its Pollution Minimization Program. This shall also include a discussion of the specific criteria used to measure the effectiveness of each of the tasks in item b.3), b.4), and b.5).
- 8) *Documentation of efforts and progress*. This discussion shall detail all the Discharger's activities in the Pollutant Minimization Program during the reporting year.
- 9) Evaluation of program's and tasks' effectiveness. The Discharger shall use the criteria established in b.6) to evaluate the Program's and tasks' effectiveness.
- 10) *Identification of Specific Tasks and Time Schedules for Future Efforts*. Based on the evaluation, the Discharger shall detail how it intends to continue or change its tasks to more effectively reduce the amount of pollutants to the treatment plant, and subsequently in its effluent.
- c. The Discharger shall develop and conduct a Pollutant Minimization Program (PMP) as further described below when there is evidence (e.g., sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, results of benthic or aquatic organism tissue sampling) that a priority pollutant is present in the effluent above an effluent limitation and either:
 - 1) A sample result is reported as detected, but not quantified (DNQ) and the effluent limitation is less than the Reporting Level (RL); or,
 - 2) a sample result is reported as not detected (less than the Method Detection Limit) and the effluent limitation is less than the Method Detection Limit using definitions in the SIP.

The PMP shall include, but not be limited to, the following actions and submittals acceptable to the Regional Water Board:

- 1) An annual review and semi-annual monitoring of potential sources of the reportable priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling;
- 2) Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system;
- 3) Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutant(s) in the effluent at or below the effluent limitation;
- 4) Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy; and

- 5) The annual report required by 3.b. above, shall specifically address the following items for the reportable priority pollutant(s):
 - a) All Pollution Minimization Program monitoring results for the previous year
 - b) A list of potential sources of the reportable priority pollutant(s)
 - c) A summary of all actions undertaken pursuant to the control strategy
 - d) A description of actions to be taken in the following year.
- e. To the extent that the requirements of the Pollution Prevention Program and the Pollutant Minimization Program overlap, the Discharger is allowed to continue, modify, or expand its Pollution Prevention Program to satisfy the Pollutant Minimization Program requirements.
- f. These Pollution Prevention/Pollutant Minimization Program requirements are not intended to fulfill the requirements in the Clean Water Enforcement and Pollution Prevention Act of 1999 (Senate Bill 709).
- 4. **Requirement to Support SSO and TMDL, and Assure Compliance with Final Limits.** This Order grants a compliance schedule for dioxin-TEQ and cyanide, and alternate final limits for cyanide based on pending SSO. The Discharger shall participate in and support the development of the dioxin-TEQ TMDL, cyanide SSO, and copper SSO.

In the event the cyanide SSO is not developed by July 1, 2009, the Discharger shall submit by July 1, 2009, a schedule that documents how it will further reduce cyanide concentrations to ensure compliance with the final limits specified in Effluent Limitations and Discharge Specifications IV.A.1.a.

5. Copper Translator Study.

If the Discharger wishes the Regional Water Board to consider site-specific translators that may be used to establish final copper limits based on dissolved criteria for copper, the Discharger shall implement a sampling plan to collect data for development of dissolved-to-total translators for copper in accordance with the following tasks:

Tasks	Schedule
(1) Site-specific translator study plan: The study plan shall outline data collection for establishment of dissolved-to-total metal translators. The study plan shall provide for development of the copper site-specific translator in accordance with US EPA guidelines.	60 days following effective date of permit
(2) <i>Implementation of the plan</i> : Upon approval by the Executive Officer, or after 30 days of the study plan submittal if the Executive Officer has not commented, the Discharger shall conduct the site-specific copper translator study. The study will use field sampling data close to the discharge point and in the vicinity of the discharge point, or as otherwise provided for in the approved study plan.	As specified in the plan.

Tasks	Schedule
(3) <i>Final report</i> : A final report, acceptable to the Executive Officer, shall be submitted, documenting the results of the site-specific translator study.	2 years following the effective date of permit

6. Construction, Operation and Maintenance Specifications

a. Wastewater Facilities, Review and Evaluation, and Status Reports

- 1) The Discharger shall operate and maintain its wastewater collection, treatment, and disposal facilities in a manner to ensure that all facilities are adequately staffed, supervised, financed, operated, maintained, repaired, and upgraded as necessary, in order to provide adequate and reliable transport, treatment, and disposal of all wastewater from both existing and planned future wastewater sources under the Discharger's service responsibilities.
- 2) The Discharger shall regularly review and evaluate its wastewater facilities and operation practices in accordance with section 1) above. Reviews and evaluations shall be conducted as an ongoing component of the Discharger's administration of its wastewater facilities.
- 3) The Discharger shall provide the Executive Officer, upon his or her request, a report describing the current status of its wastewater facilities and operation practices, including any recommended or planned actions and an estimated time schedule for these actions. The Discharger shall also include, in each annual self-monitoring report, a description or summary of review and evaluation procedures, and applicable wastewater facility programs or capital improvement projects.

b. Operations and Maintenance Manual (O&M), Review and Status Reports

- 1) The Discharger shall maintain an O & M Manual as described in the findings of this Order for the Discharger's wastewater facilities. The O & M Manual shall be maintained in usable condition, and available for reference and use by all applicable personnel.
- 2) The Discharger shall regularly review, revise, or update, as necessary, the O & M Manual(s) so that the document(s) may remain useful and relevant to current equipment and operation practices. Reviews shall be conducted annually, and revisions or updates shall be completed as necessary. For any significant changes in treatment facility equipment or operation practices, applicable revisions shall be completed within 90 days of completion of such changes.
- 3) The Discharger shall provide the Executive Officer, upon his or her request, a report describing the current status of its O&M manual, including any recommended or planned actions and an estimated time schedule for these actions. The Discharger shall also include, in each annual self-monitoring report, a description or summary of

review and evaluation procedures, and applicable changes to, its operations and maintenance manual.

c. Contingency Plan, Review and Status Reports

- 1) The Discharger shall maintain a Contingency Plan as required by Regional Water Board Resolution 74-10 (Attachment G), and as prudent in accordance with current municipal facility emergency planning. The discharge of pollutants in violation of this Order where the Discharger has failed to develop and/or adequately implement a contingency plan will be the basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.
- 2) The Discharger shall regularly review, and update as necessary, the Contingency Plan so that the plan may remain useful and relevant to current equipment and operation practices. Reviews shall be conducted annually, and updates shall be completed as necessary.
- 3) The Discharger shall provide the Executive Officer, upon his or her request, a report describing the current status of its contingency plan review and update. The Discharger shall also include, in each annual self-monitoring report, a description or summary of review and evaluation procedures, and applicable changes to, its contingency plan.

7. Special Provisions for Municipal Facilities (POTWs Only)

a. Sludge Management Practices Requirements

- 1) All sludge generated by the Discharger must be disposed of in a municipal solid waste landfill, reused by land application, or disposed of in a sludge-only landfill in accordance with 40 CFR Part 503. If the Discharger desires to dispose of sludge by a different method, a request for permit modification must be submitted to the US EPA 180 days before start-up of the alternative disposal practice. All the requirements in 40 CFR 503 are enforceable by US EPA whether or not they are stated in an NPDES permit or other permit issued to the Discharger. The Regional Water Board should be copied on relevant correspondence and reports forwarded to the US EPA regarding sludge management practices.
- 2) Sludge treatment, storage and disposal or reuse shall not create a nuisance, such as objectionable odors or flies, or result in groundwater contamination.
- 3) The Discharger shall take all reasonable steps to prevent or minimize any sludge use or disposal which has a likelihood of adversely affecting human health or the environment.
- 4) The discharge of sludge shall not cause waste material to be in a position where it is, or can be carried from the sludge treatment and storage site and deposited in the waters of the State.

- 5) The sludge treatment and storage site shall have facilities adequate to divert surface runoff from adjacent areas, to protect boundaries of the site from erosion, and to prevent any conditions that would cause drainage from the materials in the temporary storage site. Adequate protection is defined as protection from at least a 100-year storm and protection from the highest possible tidal stage that may occur.
- 6) For sludge that is applied to the land, placed on a surface disposal site, or fired in a biosolids incinerator as defined in 40 CFR 503, the Discharger shall submit an annual report to the US EPA and the Regional Water Board containing monitoring results and pathogen and vector attraction reduction requirements as specified by 40 CFR 503, postmarked February 15 of each year, for the period covering the previous calendar year.
- 7) Sludge that is disposed of in a municipal solid waste landfill must meet the requirements of 40 CFR 258. In the annual self-monitoring report, the Discharger shall include the amount of sludge disposed of, and the landfill(s) to which it was sent.
- 8) Permanent on-site sludge storage or disposal activities are not authorized by this permit. A report of Waste Discharge shall be filed and the site brought into compliance with all applicable regulations prior to commencement of any such activity by the Discharger.
- 9) Sludge Monitoring and Reporting Provisions of this Regional Water Board's "Standard Provisions, Monitoring and Reporting Requirements", dated March 2006, apply to sludge handling, disposal and reporting practices.
- 10) The Regional Water Board may amend this permit prior to expiration if changes occur in applicable state and federal sludge regulations.
- **b.** Sanitary Sewer Management Plan. The Discharger's collection system is part of the facility that is subject to this Order. As such, the Discharge must properly operate and maintain its collection system (Attachment D, Standard Provisions - Permit Compliance, subsection I.D). The Discharger must report any noncompliance (Attachment D, Standard Provision - Reporting, subsections V.E.1 and V.E.2), and mitigate any discharge from the Discharger's collection system in violation of this Order (Attachment D, Standard Provisions - Permit Compliance, subsection I.C). The General Waste Discharge Requirements for Collection System Agencies (Order No. 2006-0003 DWQ) has requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows. While the Discharger must comply with both the General Waste Discharge Requirements for Collection System Agencies (General Collection System WDR) and this Order, the General Collection System WDR more clearly and specifically stipulates requirements for operation and maintenance and for reporting and mitigating sanitary sewer overflows. Implementation of the General Collection System WDR requirements for proper operation and maintenance and mitigation of spills will satisfy the corresponding federal NPDES requirements specified in this Order. Following reporting requirements in the General Collection System WDR

will satisfy NPDES reporting requirements for sewage spills. Furthermore, the Discharger shall comply with the schedule for development of sewer system management plans (SSMPs) as indicated in the letter issued by the Regional Water Board on July 7, 2005, pursuant to Water Code Section 13267. Until the statewide on-line reporting system becomes operational, the Discharger shall report sanitary sewer overflows electronically according to the Regional Water Board's SSO reporting program.

9. Other Special Provisions - None

VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in Section IV of this Order will be determined as specified below:

A. General

Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined in the MRP and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

B. Multiple Sample Data

When determining compliance with an AMEL ,AWEL, or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

- 1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
- 2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

A. Average Monthly Effluent Limitation (AMEL).

If the average of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that calendar month. The Discharger will only be considered out of compliance

for days when the discharge occurs. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

B. Average Weekly Effluent Limitation (AWEL).

If the average of daily discharges over a calendar week exceeds the AWEL for a given parameter, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that week for that parameter, resulting in 7 days of non-compliance. If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWEL, the Discharger will be considered out of compliance for that calendar week. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar week during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar week.

C. Maximum Daily Effluent Limitation (MDEL).

If a daily discharge exceeds the MDEL for a given parameter, the Discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

D. Instantaneous Minimum Effluent Limitation.

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

E. Instantaneous Maximum Effluent Limitation.

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

F. Six-month Median Effluent Limitation.

If the median of daily discharges over any 180-day period exceeds the six-month median effluent limitation for a given parameter, the Discharger will be considered out of compliance for each day of that 180-day period for that parameter. The next assessment of compliance will occur after the next sample is taken. If only a single sample is taken during a given 180-day period and the analytical result for that sample exceeds the six-month median, the Discharger will be considered out of compliance for the 180-day period. For any 180-period during which no sample is taken, no compliance determination can be made for the six-month median limitation.

ATTACHMENT A – DEFINITIONS

Average Monthly Effluent Limitation (AMEL): the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL): the highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Daily Discharge: Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Instantaneous Maximum Effluent Limitation: the highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation: the lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Maximum Daily Effluent Limitation (MDEL): the highest allowable daily discharge of a pollutant.

Six-month Median Effluent Limitation: the highest allowable moving median of all daily discharges for any 180-day period.

Reporting Level (RL) is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

ATTACHMENT B – TOPOGRAPHIC MAP

ATTACHMENT C – FLOW SCHEMATIC

ATTACHMENT D – FEDERAL STANDARD PROVISIONS

I. STANDARD PROVISIONS - PERMIT COMPLIANCE

A. Duty to Comply

- 1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or denial of a permit renewal application [40 CFR §122.41(a)].
- 2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not been modified to incorporate the requirement [40 CFR §122.41(a)(1)].

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order [40 CFR §122.41(c)].

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment [40 CFR §122.41(d)].

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order [40 CFR §122.41(e)].

E. Property Rights

- 1. This Order does not convey any property rights of any sort or any exclusive privileges [40 CFR §122.41(g)].
- 2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations [40 CFR §122.5(c)].

F. Inspection and Entry

The Discharger shall allow the Regional Water Quality Control Board (Regional Water Board), State Water Resources Control Board (SWRCB), United States Environmental Protection Agency (US EPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to [40 CFR §122.41(i)] [CWC 13383(c)]:

- 1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order [40 CFR §122.41(i)(1)];
- 2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order [40 CFR §122.41(i)(2)];
- 3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order [40 CFR §122.41(i)(3)];
- 4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the CWC, any substances or parameters at any location $[40 \ CFR \ \S 122.41(i)(4)]$.

G. Bypass

1. Definitions

- a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility $[40 \ CFR \ \S 122.41(m)(1)(i)]$.
- b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production [40 CFR §122.41(m)(1)(ii)].
- 2. Bypass not exceeding limitations The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions Permit Compliance I.G.3 and I.G.5 below [40 CFR §122.41(m)(2)].
- 3. Prohibition of bypass Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless $[40 \ CFR \ \S 122.41(m)(4)(i)]$:
 - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage $[40 \ CFR \ \S 122.41(m)(4)(A)];$

- b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance [40 CFR §122.41(m)(4)(B)]; and
- c. The Discharger submitted notice to the Regional Water Board as required under Standard Provision Permit Compliance I.G.5 below $[40 \ CFR \ \S 122.41(m)(4)(C)]$.
- 4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions Permit Compliance I.G.3 above [40 CFR §122.41(m)(4)(ii)].

5. Notice

- a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass [40 CFR $\S122.41(m)(3)(i)$].
- b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions Reporting V.E below [40 CFR §122.41(m)(3)(ii)].

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation [40 CFR $\S122.41(n)(1)$].

- 1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph H.2 of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review [40 CFR §122.41(n)(2)].
- 2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that [40 CFR §122.41(n)(3)]:
 - a. An upset occurred and that the Discharger can identify the cause(s) of the upset [40 CFR $\S122.41(n)(3)(i)$];
 - b. The permitted facility was, at the time, being properly operated [40 CFR $\S122.41(n)(3)(i)$];

- c. The Discharger submitted notice of the upset as required in Standard Provisions Reporting V.E.2.b [40 CFR §122.41(n)(3)(iii)]; and
- d. The Discharger complied with any remedial measures required under Standard Provisions Permit Compliance I.C above [40 CFR §122.41(n)(3)(iv)].
- 3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof $[40 \ CFR \ \$122.41(n)(4)]$.

II. STANDARD PROVISIONS - PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition $[40 \ CFR \ \S 122.41(f)]$.

B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit [40 CFR §122.41(b)].

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the CWC [40 CFR §122.41(l)(3)] [40 CFR §122.61].

III. STANDARD PROVISIONS - MONITORING

- **A.** Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity $[40 \ CFR \ \S 122.41(j)(1)]$.
- **B.** Monitoring results must be conducted according to test procedures under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503 unless other test procedures have been specified in this Order [40 CFR §122.41(j)(4)] [40 CFR §122.44(i)(1)(iv)].

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at

least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time [40 CFR $\S122.41(j)(2)$].

B. Records of monitoring information shall include:

- 1. The date, exact place, and time of sampling or measurements $[40 \ CFR \ \S 122.41(j)(3)(i)]$;
- 2. The individual(s) who performed the sampling or measurements $[40 \ CFR \ \S 122.41(j)(3)(ii)]$;
- 3. The date(s) analyses were performed [40 CFR §122.41(j)(3)(iii)];
- 4. The individual(s) who performed the analyses $[40 \ CFR \ \S 122.41(j)(3)(iv)]$;
- 5. The analytical techniques or methods used [40 CFR $\S122.41(j)(3)(v)$]; and
- 6. The results of such analyses $[40 \ CFR \ \S 122.41(j)(3)(vi)]$.

C. Claims of confidentiality for the following information will be denied [40 CFR §122.7(b)]:

- 1. The name and address of any permit applicant or Discharger [40 CFR §122.7(b)(1)]; and
- 2. Permit applications and attachments, permits and effluent data [40 CFR §122.7(b)(2)].

V. STANDARD PROVISIONS - REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, SWRCB, or US EPA within a reasonable time, any information which the Regional Water Board, SWRCB, or US EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, SWRCB, or US EPA copies of records required to be kept by this Order [40 CFR §122.41(h)] [CWC 13267].

B. Signatory and Certification Requirements

- 1. All applications, reports, or information submitted to the Regional Water Board, SWRCB, and/or US EPA shall be signed and certified in accordance with paragraph (2.) and (3.) of this provision [40 CFR §122.41(k)].
- 2. All permit applications shall be signed as follows:
 - a. For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities,

provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures [40 CFR §122.22(a)(1)];

- b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively [40 CFR §122.22(a)(2)]; or
- c. For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA) [40 CFR §122.22(a)(3)].
- 3. All reports required by this Order and other information requested by the Regional Water Board, SWRCB, or USEPA shall be signed by a person described in paragraph (b) of this provision, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described in paragraph (2.) of this provision [40 CFR $\S122.22(b)(1)$];
 - b. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company (a duly authorized representative may thus be either a named individual or any individual occupying a named position) [40 CFR §122.22(b)(2)]; and
 - c. The written authorization is submitted to the Regional Water Board, SWRCB, or USEPA [40 CFR §122.22(b)(3)].
- 4. If an authorization under paragraph (3.) of this provision is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (3.) of this provision must be submitted to the Regional Water Board, SWRCB or USEPA prior to or together with any reports, information, or applications, to be signed by an authorized representative [40 CFR §122.22(c)].
- 5. Any person signing a document under paragraph (2.) or (3.) of this provision shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations" [40 CFR §122.22(d)].

C. Monitoring Reports

- 1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program in this Order [40 CFR §122.41(l)(4)].
- 2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or SWRCB for reporting results of monitoring of sludge use or disposal practices [40 CFR §122.41(l)(4)(i)].
- 3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board [40 CFR §122.41(l)(4)(ii)].
- 4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order [40 CFR §122.41(l)(4)(iii)].

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date $[40 \ CFR \ \S 122.41(l)(5)]$.

E. Twenty-Four Hour Reporting

- 1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance [40 CFR §122.41(1)(6)(i)].
- 2. The following shall be included as information that must be reported within 24 hours under this paragraph $[40 \ CFR \ \S 122.41(l)(6)(ii)]$:

- a. Any unanticipated bypass that exceeds any effluent limitation in this Order [40 CFR $\S122.41(l)(6)(ii)(A)$].
- b. Any upset that exceeds any effluent limitation in this Order [40 CFR $\S122.41(l)(6)(ii)(B)$].
- c. Violation of a maximum daily discharge limitation for any of the pollutants listed in this Order to be reported within 24 hours [40 CFR $\S122.41(l)(6)(ii)(C)$].
- 3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours [40 CFR §122.41(l)(6)(iii)].

F. Planned Changes

The Discharger shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when [40 CFR §122.41(1)(1)]:

- 1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR §122.29(b) [40 CFR §122.41(l)(1)(i)]; or
- 2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in this Order nor to notification requirements under 40 CFR Part 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1) [40 CFR §122.41(l)(1)(ii)].
- 3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan [40 CFR §122.41(l)(1)(iii)].

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Regional Water Board or SWRCB of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements [40 CFR §122.41(l)(2)].

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting E.3, E.4, and E.5 at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E [40 CFR §122.41(1)(7)].

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, SWRCB, or USEPA, the Discharger shall promptly submit such facts or information [40 CFR §122.41(l)(8)].

VI. STANDARD PROVISIONS - ENFORCEMENT

- A. The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The CWA provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the Clean Water Act, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions [40 CFR §122.41(a)(2)] [CWC 13385 and 13387].
- **B.** Any person may be assessed an administrative penalty by the Regional Water Board for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000 [40 CFR \$122.41(a)(3)].
- C. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon

conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both $[40 \ CFR \ \S 122.41(j)(5)]$.

D. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Order, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both [40 CFR §122.41(k)(2)].

VII. ADDITIONAL PROVISIONS - NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural dischargers shall notify the Regional Water Board as soon as they know or have reason to believe [40 CFR §122.42(a)]:

- 1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" [40 CFR §122.42(a)(1)]:
 - a. 100 micrograms per liter ($\mu g/L$) [40 CFR §122.42(a)(1)(i)];
 - b. 200 μg/L for acrolein and acrylonitrile; 500 μg/L for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony [40 CFR §122.42(a)(1)(ii)];
 - c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [40 CFR §122.42(a)(1)(iii)]; or
 - d. The level established by the Regional Water Board in accordance with 40 CFR §122.44(f) [40 CFR §122.42(a)(1)(iv)].
- 2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" [40 CFR §122.42(a)(2)]:
 - a. 500 micrograms per liter (μ g/L) [40 CFR §122.42(a)(2)(i)];
 - b. 1 milligram per liter (mg/L) for antimony [40 CFR §122.42(a)(2)(ii)];
 - c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [40 CFR §122.42(a)(2)(iii)]; or

d. The level established by the Regional Water Board in accordance with 40 CFR §122.44(f) [40 CFR §122.42(a)(2)(iv)].

B. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Regional Water Board of the following [40 CFR §122.42(b)]:

- 1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to Sections 301 or 306 of the CWA if it were directly discharging those pollutants [40 CFR §122.42(b)(1)]; and
- 2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order [40 CFR §122.42(b)(2)].

Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW $[40 \ CFR \ \S 122.42(b)(3)]$.

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Attachment E – MRP

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (CFR) at 40 CFR §122.48 requires that all NPDES permits specify monitoring and reporting requirements. CWC sections 13267 and 13383 also authorize the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements which implement the Federal and California regulations.

I. GENERAL MONITORING PROVISIONS

- **A.** The Discharger shall comply with the MRP for this Order as adopted by the Regional Water Board, and with all of the Self-Monitoring Program, Part A, adopted August 1993 (SMP, Attachment G of this Order). The MRP and SMP may be amended by the Executive Officer pursuant to US EPA regulations 40 CFR122.62, 122.63, and 124.5. If any discrepancies exist between the MRP and SMP, the MRP prevails.
- **B.** Sampling is required during the entire year when discharging. All analyses shall be conducted using current US EPA methods, or that have been approved by the US EPA Regional Administrator pursuant to 40 CFR 136.4 and 40 CFR 136.5, or equivalent methods that are commercially and reasonably available, and that provide quantification of sampling parameters and constituents sufficient to evaluate compliance with applicable effluent limits. Equivalent methods must be more sensitive than those specified in 40 CFR 136, must be specified in the permit, and must be approved for use by the Executive Officer, following consultation with the State Water Board's Quality Assurance Program. The Regional Water Board will find the Discharger in violation of the limitation if the discharge concentration exceeds the effluent limitation and the Reporting Level for the analysis for that constituent.
- C. Minimum Levels. For compliance monitoring, analyses shall be conducted using the lowest commercially available and reasonably achievable detection levels. The objective is to provide quantification of constituents sufficient to allow evaluation of observed concentrations with respect to the Minimum Levels given below. All Minimum Levels are expressed as μg/L approximately equal to parts per billion (ppb).

According to the SIP, method-specific factors can be applied. In such cases, this additional factor must be applied in the computation of the Reporting Level. Application of such factors will alter the Reporting Level from the Minimum Level for the analysis. Dischargers are to instruct laboratories to establish calibration standards so that the Minimum Level value is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve. The table below indicates the highest minimum level that the Discharger's laboratory must achieve for calibration purposes.

Constituent	Minimum Level	<u>Units</u>
Copper	2	μg/L
Mercury	0.0005	μg/L
Cyanide	5	μg/L

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
	A-1	At any point in the treatment facilities headworks at which all waste tributary to the treatment system is present, and preceding any phase of treatment.
E-001	E-001	At a point in the treatment facility, at which all waste tributary to the discharge outfall is present, is representative of the discharge, and at which point adequate disinfection is assured for the discharge to the marsh.
E-001W	B-Weir	At a point in the discharge stream from Moorhen Marsh at plot B-Weir
E-001A	McN-A	At a point on the northwestern part of McNabney Marsh
E-001B	McN-B	At a point in McNabney Marsh, south of the corner of Waterbird Way and Waterfront Road
E-001C	McN-C	At a point in the southeastern part of McNabney Marsh
	C-R	At a point in Upper Peyton Slough, located upstream of the Pond A discharge weir
	C-1	At a point in Upper Peyton Slough, located within 50 feet downstream of the Pond B discharge weir
	C-2	At a point in Upper Peyton Slough, located at the downstream headwall of the culvert under Interstate 680
	C-3	At a point in Upper Peyton Slough, located 30 feet upstream of the culvert under Waterfront Road
	C-4	At a point in Upper Peyton Slough, located downstream of Rhodia Tide Gate

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location – A-1

1. The Discharger shall monitor the influent to the Facility at A-1 as follows:

Parameter	Units ^[1]	Sample Type ^[2]	Minimum Sampling Frequency
BOD 5-day 20°C	mg/L	C-24	Weekly
Total Suspended Solids	mg/L	C-24	Weekly

[1] <u>Unit Abbreviations</u>:

MGD = million gallons per day mg/L = milligrams per liter

[2] Sample Type Abbreviations:

Continuous = Measured continuously, and recorded and reported daily C-24 = 24-hour composite

Influent monitoring identified in the table above is the minimum required monitoring.
 Additional sampling and analyses may be required in accordance with the Pollution
 Minimization/Source Control Program requirements.

IV. EFFLUENT MONITORING REQUIREMENTS – DISCHARGE POINT E-001

A. Monitoring Location – E-001

The Discharger shall monitor treated wastewater at E-001 as follows:

Parameter	Units ^[1]	Sample Type ^[2]	Minimum Sampling Frequency
Flow Rate ^[3]	MGD	Continuous	Continuous
рН	Standard Units	Grab ^[4]	Once per day
Temperature	°C	Grab ^[4]	Once per day
Dissolved Oxygen (DO)	mg/L & percent saturation	Grab ^[4]	Weekly
Sulfides (if DO < 2.0 mg/L)	mg/L	Grab ^[4]	Weekly
BOD 5-day 20°C	mg/L	C-24	Weekly
Total Suspended Solids	mg/L	C-24	Weekly
Oil & Grease ^[5]	mg/L	Grab ^[4]	Quarterly
Ammonia Nitrogen ^[6]	mg/L as N	Grab ^[4]	Monthly
Hardness	mg/L as CaCO ₃	C-24	Monthly
Total Coliform ^[7]	MPN / 100 ml	Grab ^[4]	Three times per week
Copper	μg/L	C-24	Monthly
Cyanide ^[8]	μg/L	Grab ^[4]	Monthly
Mercury ^[9]	μg/L	C-24 or Grab ^[4]	Monthly
Acute Toxicity ^[10]	Percent Survival	C-24	Monthly
2,3,7,8-TCDD and congeners ^[11]	pg/L	Grab ^[4]	Twice per year (once in dry season, and once in wet season)
August 6, 2001 Letter, Table 1 Selected Constituents (except those listed above), metals.	μg/L	C-24	Quarterly
August 6, 2001 Letter, Table 1 Selected Constituents (except those listed above), organics.	μg/L	Grab ^[4]	Annually
Standard Observations			Monthly

[1] <u>Unit Abbreviations</u>:

MGD = million gallons per day

°C = Cemtigrade

MPN/ 100 ml = Most Probable Number per 100 milliliters

 $\begin{array}{ll} mg/L & = milligrams \ per \ liter \\ pg/L & = picograms \ per \ liter \\ \mu g/L & = micrograms \ per \ liter \end{array}$

[2] Sample Type Abbreviations:

Continuous = Measured continuously, and recorded and reported daily

C-24 = 24-hour composite

[3] <u>Flow Monitoring</u>: Effluent flow shall be measured continuously and recorded daily, and the following information shall also be reported monthly:

Daily Flow (MG)

Average Daily Flow (MGD) Maximum Daily Flow (MGD) Minimum Daily Flow (MGD) Total Flow Volume (MG)

Reporting requirements under this section may be satisfied by monthly reporting using the electronic reporting system (ERS), or an equivalent electronic system required by the Regional Water Board or State Water Board.

- [4] <u>Grab Samples</u> shall be collected coincident with composite samples collected for the analysis of regulated parameters.
- [5] Oil & Grease Monitoring: Each Oil & Grease sample event shall consist of a composite sample comprised of three grab samples taken at equal intervals during the sampling date, with each grab sample being collected in a glass container. Each glass container used for sample collection or mixing shall be thoroughly rinsed with solvent rinsing as soon as possible after use, and the solvent rinsing shall be added to the composite sample for extraction and analysis.
- [6] Ammonia Nitrogen shall be measured as total ammonia.
- [7] <u>Total Coliform:</u> When replicate analyses are made of a total coliform sample, the reported result shall be the arithmetic mean of the samples.
- [8] Cvanide: Compliance may be demonstrated by measurement of weak acid dissociable cyanide.
- [9] Mercury: The Discharger shall use ultra-clean sampling (USEPA 1669), and ultra-clean analytical methods (USEPA 1631) for mercury monitoring.
- [10] Whole Effluent Toxicity: Whole effluent toxicity testing shall be performed in accordance with Section V. of this MRP.
- [11] 2,3,7,8-TCDD and congeners: Chlorinated Dibenzodioxins and Chlorinated Dibenzofurans shall be analyzed using the latest version of US EPA Method 1613; the analysis shall be capable of achieving one half the US EPA method 1613 Minimum Levels. Alternative methods of analysis must be approved by the Executive Officer. In addition to reporting results for each of the 17 congeners, the TCDD TEQ shall be calculated and reported using 1998 US EPA Toxicity Equivalent Factors for dioxin and furan congeners.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Whole Effluent Acute Toxicity

Compliance with whole effluent acute toxicity requirements of this Order shall be achieved in accordance with the following:

- 1. Acute toxicity effluent limits shall be evaluated by measuring survival of test organisms exposed to 96-hour flow through bioassays;
- 2. Test organism shall be fathead minnow unless specified otherwise in writing by the Executive Officer; and
- 3. All bioassays shall be performed according to 40 CFR 136, currently the "Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms", 5th Edition. Exceptions may be granted to the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP).
- 4. If specific identifiable substances in the discharge can be demonstrated by the Discharger as being rapidly rendered harmless upon discharge to the receiving water, compliance with the acute toxicity limit may be determined after the test samples are adjusted to remove the influence of those substances. Written approval from the Executive Officer must be obtained to authorize such an adjustment.
- 5. Effluent used for fish bioassays must be dechlorinated prior to testing. Monitoring of the bioassay water shall include, on a daily basis, the following parameters: pH, dissolved oxygen, ammonia (if toxicity is observed), temperature, hardness, and alkalinity. These

results shall be reported. If a violation of acute toxicity requirements occurs or if the control fish survival rate is less than 90 percent, the bioassay test shall be restarted with new batches of fish and shall continue back to back until compliance is demonstrated.

B. Chronic Toxicity

1. Chronic Toxicity Monitoring Screening Phase Requirements, Critical Life Stage Toxicity Tests, and definitions of terms used in the chronic toxicity monitoring are identified in Appendix E-I of the MRP. The Discharger shall comply with these requirements, and conduct screening phase monitoring, as outlined in **Appendix E-I**. The Discharger may reduce the total number of required test species from 5 to 3 during stage one screening.

VI. LAND DISCHARGE MONITORING REQUIREMENTS – N/A

VII. RECLAMATION MONITORING REQUIREMENTS – DISCHARGE POINTS E-001W, E-001A, E-001B, AND E-001C.

A. Monitoring Location – B-Weir, McN-A, McN-B, and McN-C

The Discharger shall monitor the marsh at monitoring locations B-Weir, McN-A, McN-B, and McN-C as follows:

Parameter	Units [1]	Sample Type	Minimum Sampling Frequency
Turbidity	NTU	Grab	Monthly
pH	standard unit	Grab	Monthly
Temperature	°F	Grab	Monthly
Dissolved Oxygen	mg/L and percent saturation	Grab	Monthly
Sulfides, Total & Dissolved [2]	mg/L	Grab	Monthly
Ammonia Nitrogen ^[3]	mg/L as N	Grab	Quarterly
Salinity	ppt	Grab	Monthly
Hardness (as CaCO ₃)	mg/L	Grab	Monthly
Standard Observations ^[4]			Monthly

[1] Unit Abbreviations:

NTU = nephelometric turbidity units

°F = degree Fahrenheit mg/L = milligrams per liter

ppt = parts per thousand

- [2] <u>Sulfide samples should be run when dissolved oxygen is less than 2.0 mg/L.</u>
- [3] <u>Ammonia Nitrogen</u> shall be measured as total ammonia; the unionized fraction shall be calculated based on the total ammonia, pH, total dissolved solids or salinity, and temperature.
- [4] Standard Observations include:
 - a. Floating and suspended materials of waste origin (to include oil, grease, algae, and other macroscopic particulate matter), presence or absence, source, and size of affected area.
 - b. Discoloration and turbidity: description of color, source, and size of affected area.
 - c. Odor: presence or absence, characterization, source, distance of travel, and wind direction.

d. Hydrographic condition:

- 1) Time and height of corrected high and low tides (corrected to nearest NOAA location for the sampling date and time of sample and collection).
- 2) Depth of water columns and sampling depths.
- e. Weather conditions:
 - 1) Air temperatures.
 - 2) Wind-direction and estimated velocity.
 - 3) Total precipitation during the previous five days and on the day of observation.

VIII.RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER

A. Monitoring Location – C-R, C-1, C-2, C-3, and C-4

The Discharger shall monitor Peyton Slough at monitoring locations C-R, C-1, C-2, C-3, and C-4 as follows:

Parameter	Units [1]	Sample Type	Minimum Sampling Frequency
Turbidity	NTU	Grab	Twice per year
pH	standard unit	Grab	Monthly
Temperature	°F	Grab	Monthly
Dissolved Oxygen	mg/L and percent saturation	Grab	Monthly
Sulfides, Total & Dissolved [2]	mg/L	Grab	Monthly
Ammonia Nitrogen [3]	mg/L as N	Grab	Quarterly
Hardness (as CaCO ₃)	mg/L	Grab	Monthly
Standard Observations ^[4]			Monthly

[1] Unit Abbreviations:

NTU = nephelometric turbidity units

°F = degree Fahrenheit

mg/L = milligrams per liter

- [2] Sulfide samples should be run when dissolved oxygen is less than 2.0 mg/L.
- [3] <u>Ammonia Nitrogen</u> shall be measured as total ammonia; the unionized fraction shall be calculated based on the total ammonia, pH, total dissolved solids or salinity, and temperature.

[4] Standard Observations include:

- a. Floating and suspended materials of waste origin (to include oil, grease, algae, and other macroscopic particulate matter), presence or absence, source, and size of affected area.
- b. Discoloration and turbidity: description of color, source, and size of affected area.
- c. Odor: presence or absence, characterization, source, distance of travel, and wind direction.
- d. Hydrographic condition:
 - 1) Time and height of corrected high and low tides (corrected to nearest NOAA location for the sampling date and time of sample and collection).
 - 2) Depth of water columns and sampling depths.
- e. Weather conditions:
 - 1) Air temperatures.
 - 2) Wind-direction and estimated velocity.
 - 3) Total precipitation during the previous five days and on the day of observation.

IX. OTHER MONITORING REQUIREMENTS – None

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachments D and G) related to monitoring, reporting, and recordkeeping.

B. Self Monitoring Reports (SMRs)

- 1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit self-monitoring reports. Until such notification is given, the Discharger shall submit self-monitoring reports in accordance with the requirements described below.
- 2. The Dischargers shall submit monthly and annual Self Monitoring Reports including the results of all required monitoring using US EPA-approved test methods or other test methods specified in this Order. Monthly reports shall be due no later than 30 days after the end of each calendar month. Annual reports shall be due on February 1 following each calendar year.
- 3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Sampling Frequency	Monitoring Period Begins On	Monitoring Period
Continuous (Daily)	Effective date of permit	All
Once per day	Effective date of permit	Any 24-hour period that reasonably represents a calendar day for purposes of sampling.
Weekly, or Twice per week	Effective date of permit	Sunday through Saturday
Monthly	Effective date of permit	1 st day of calendar month through last day of calendar month
Quarterly	Effective date of permit	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31
Annually, or Twice per year	Effective date of permit	January 1 through December 31

4. The Dischargers shall report with each sample result the applicable Minimum Level (ML) or Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR Part 136.

The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

- a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (+ a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

- c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
- d. The Dischargers shall instruct laboratories to establish calibration standards so that the RL value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. The Discharger shall not use analytical data derived from *extrapolation* beyond the lowest point of the calibration curve.
- 5. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the Facility is operating in compliance with interim and/or final effluent limitations.
- 6. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.
- 7. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

Executive Officer California Regional Water Quality Control Board San Francisco Bay Region 1515 Clay Street, Suite 1400 Oakland, CA 94612 ATTN: NPDES Permit Division

8. The Discharger has the option to submit all monitoring results in an electronic reporting format approved by the Executive Officer. The Electronic Reporting System (ERS) format includes, but is not limited to, a transmittal letter, summary of violation details and corrective actions, and transmittal receipt. If there are any discrepancies between the ERS requirements and the "hard copy" requirements listed in the MRP, then the approved ERS requirements supersede.

C. Discharge Monitoring Reports (DMRs)

1. As described in Section X.B.1 above, at any time during the term of this permit, the State or Regional Water Board may notify the discharger to electronically submit self-monitoring

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reports. Until such notification is given, the Discharger shall submit discharge monitoring reports (DMRs) in accordance with the requirements described below.

2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharge shall submit the original DMR and one copy of the DMR to the address listed below:

State Water Resources Control Board Discharge Monitoring Report Processing Center Post Office Box 671 Sacramento, CA 95812

3. All discharge monitoring results must be reported on the official US EPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated or modified cannot be accepted.

$D. \ Other \ Reports-N/A$

Appendix E-1

CHRONIC TOXICITY

DEFINITION OF TERMS AND SCREENING PHASE REQUIREMENTS

I. Definition of Terms

- A. No observed effect level (NOEL) for compliance determination is equal to IC₂₅ or EC₂₅. If the IC₂₅ or EC₂₅ cannot be statistically determined, the NOEL shall be equal to the NOEC derived using hypothesis testing.
- B. <u>Effective concentration</u> (EC) is a point estimate of the toxicant concentration that would cause an adverse effect on a quantal, "all or nothing," response (such as death, immobilization, or serious incapacitation) in a given percent of the test organisms. If the effect is death or immobility, the term lethal concentration (LC) may be used. EC values may be calculated using point estimation techniques such as probit, logit, and Spearman-Karber. EC₂₅ is the concentration of toxicant (in percent effluent) that causes a response in 25 percent of the test organisms.
- C. <u>Inhibition concentration</u> (IC) is a point estimate of the toxicant concentration that would cause a given percent reduction in a nonlethal, nonquantal biological measurement, such as growth. For example, an IC₂₅ is the estimated concentration of toxicant that would cause a 25 percent reduction in average young per female or growth. IC values may be calculated using a linear interpolation method such as USEPA's Bootstrap Procedure.
- D. <u>No observed effect concentration</u> (NOEC) is the highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specific time of observation. It is determined using hypothesis testing.

II. Chronic Toxicity Screening Phase Requirements

- A. The Discharger shall perform screening phase monitoring:
 - 1. Subsequent to any significant change in the nature of the effluent discharged through changes in sources or treatment, except those changes resulting from reductions in pollutant concentrations attributable to source control efforts, or
 - Prior to permit reissuance. Screening phase monitoring data shall be included in the NPDES
 permit application for reissuance. The information shall be as recent as possible, but may be
 based on screening phase monitoring conducted within 5 years before the permit expiration
 date.
- B. Design of the screening phase shall, at a minimum, consist of the following elements:

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1. Use of test species specified in **Appendix E-2**, attached, and use of the protocols referenced in those tables, or as approved by the Executive Officer.

2. Two stages:

- a. <u>Stage 1</u> shall consist of a minimum of one battery of tests conducted concurrently. Selection of the type of test species and minimum number of tests shall be based on **Appendix E-2** (attached).
- b. <u>Stage 2</u> shall consist of a minimum of two test batteries conducted at a monthly frequency using the three most sensitive species based on the Stage 1 test results and as approved by the Executive Officer.
- 3. Appropriate controls.
- 4. Concurrent reference toxicant tests.
- 5. Dilution series 100%, 50%, 25%, 10%, 5%, 0 %, where "%" is percent effluent as discharged, or as otherwise approved the Executive Officer.
- C. The Discharger shall submit a screening phase proposal acceptable to the Executive Officer. The proposal shall address each of the elements listed above. If within 30 days, the Executive Officer does not comment, the Discharge shall commence with screening phase monitoring.

Appendix E-2

SUMMARY OF TOXICITY TEST SPECIES REQUIREMENTS

Critical Life Stage Toxicity Tests for Estuarine Waters

Species	(Scientific Name)	Effect	Test Duration	Reference
Alga	(Skeletonema costatum) (Thalassiosira pseudonana)	Growth rate	4 days	1
Red alga	(Champia parvula)	Number of cystocarps	7–9 days	3
Giant kelp	(Macrocystis pyrifera)	Percent germination; germ tube length	48 hours	2
Abalone	(Haliotis rufescens)	Abnormal shell development	48 hours	2
Oyster Mussel	(Crassostrea gigas) (Mytilus edulis)	Abnormal shell development; percent survival	48 hours	2
Echinoderms - Urchins Sand dollar	(Strongylocentrotus purpuratus, S. franciscanus) (Dendraster excentricus)	Percent fertilization	1 hour	2
Shrimp	(Mysidopsis bahia)	Percent survival; growth	7 days	3
Shrimp	(Holmesimysis costata)	Percent survival; growth	7 days	2
Topsmelt	(Atherinops affinis)	Percent survival; growth	7 days	2
Silversides	(Menidia beryllina)	Larval growth rate; percent survival	7 days	3

Toxicity Test References:

- 1. American Society for Testing Materials (ASTM). 1990. Standard Guide for Conducting Static 96-Hour Toxicity Tests with Microalgae. Procedure E 1218-90. ASTM, Philadelphia, PA.
- 2. Short-term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine and Estuarine Organisms. EPA/600/R-95/136. August 1995.

3. Short-term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to Marine and Estuarine Organisms. EPA/600/4-90/003. July 1994.

Critical Life Stage Toxicity Tests for Fresh Waters

Species	(Scientific Name)	Effect	Test Duration	Reference
Fathead minnow	(Pimephales promelas)	Survival; growth rate	7 days	4
Water flea	(Ceriodaphnia dubia)	Survival; number of young	7 days	4
Alga	(Selenastrum capricornutum)	Cell division rate	4 days	4

Toxicity Test Reference:

4. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, third edition. EPA/600/4-91/002. July 1994.

Toxicity Test Requirements for Stage One Screening Phase

Requirements	Receiving Water Characteristics			
	Discharges to Coast Discharges to San Francisco Bay ^[2]		n Francisco Bay ^[2]	
	Ocean	Marine/Estuarine	Freshwater	
Taxonomic diversity	1 plant 1 invertebrate 1 fish	1 plant 1 invertebrate 1 fish	1 plant 1 invertebrate 1 fish	
Number of tests of each salinity type: Freshwater ^[1] Marine/Estuarine	0 4	1 or 2 3 or 4	3 0	
Total number of tests	4	5	3	

- [1] The freshwater species may be substituted with marine species if:
 - (a) The salinity of the effluent is above 1 part per thousand (ppt) greater than 95 percent of the time, or
 - (b) The ionic strength (TDS or conductivity) of the effluent at the test concentration used to determine compliance is documented to be toxic to the test species.
- [2] (a) Marine/Estuarine refers to receiving water salinities greater than 1 ppt at least 95 percent of the time during a normal water year.
 - (b) Fresh refers to receiving water with salinities less than 1 ppt at least 95 percent of the time during a normal water year.

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ATTACHMENT 1 – MONITORING LOCATION MAP

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ATTACHMENT F - FACT SHEET

As described in Section II of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the Facility.

WDID	2 071029001
Discharger	Mt. View Sanitary District
Name of Facility	Mt. View Sanitary District Wastewater Treatment Plant and its collection system
	3800 Arthur Road
Facility Address	Martinez, CA 94553
	Contra Costa County
Facility Contact, Title and Phone	David R. Contreras, District Manager, (925) 228-5635 ext. 32
Authorized Person to Sign and Submit Reports	David R. Contreras
Mailing Address	Same
Billing Address	P. O. Box 2757, Martinez, CA 94553
Type of Facility	POTW
Major or Minor Facility	Major
Threat to Water Quality	2
Complexity	A
Pretreatment Program	N
Reclamation Requirements	Producer
Facility Permitted Flow	3.2 million gallons per day (mgd) (average dry weather)
Facility Design Flow	3.2 mgd (dry weather design capacity)
racinty Design Flow	8.5 mgd (wet weather design capacity)
Watershed	Peyton
Receiving Water	Peyton Slough, a tributary to Carquinez Strait
Receiving Water Type	Estuarine

- **A.** Mt. View Sanitary District, (hereinafter Discharger) is the owner and operator of the Mt. View Sanitary District Wastewater Treatment Plant (hereinafter Facility), a publicly owned treatment works (POTW).
- **B.** The Facility discharges wastewater to Peyton Slough, a water of the United States, and is currently regulated by Order No. 00-086 which was adopted on August 16, 2000, and expired on August 16, 2005. Pursuant to 40 CFR Part 122.6, the terms of Order No. 00-086 were administratively extended by a letter dated August 2, 2005.
- C. The Discharger filed a report of waste discharge and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on February 10, 2005. Supplemental Information was requested on April 28, 2005, and received on June 10, 2005.

II. FACILITY DESCRIPTION

A. Description of Wastewater and Sludge Treatment or Controls

- 1. Wastewater Sources. The Facility provides advanced secondary treatment of wastewater from six square miles of residential and small business contributors within the City of Martinez. The Discharger's present service area population is 23,000.
- 2. Wastewater Treatment. The Facility has an average dry weather flow design capacity of 3.2 mgd, an average dry weather flow of 1.9 mgd, and a wet weather capacity of 8.5 mgd. The treatment process consists of primary clarifiers, trickling filter, ammonia removal through a biotower, secondary clarifier, final filtration through a Parkson sand filter, and disinfection by ultra violet irradiation. The treated wastewater discharges to a 20 acre constructed marsh, and the marsh water flows through Peyton Slough (a natural slough), which carries flows to 137 acres of natural, brackish marsh.
- **3. Sludge Handling and Disposal.** Sludge is digested, and then dewatered by a centrifuge. The sludge volume is further reduced in drying beds, and the runoff from these beds is collected in a sump and pumped back to the headworks of the treatment plant. Biosolids are presently used as alternative daily cover at B&J Landfill in Dixon.

B. Discharge Points and Receiving Waters

1. Discharge Point E-001.

The Facility's treated wastewater is passed through filters to remove any remaining solids that might interfere with the ultraviolet disinfection process. Once the wastewater passes by banks of ultraviolet lights to kill disease causing bacteria, the effluent is discharged to the Discharger's constructed marsh.

2. Discharge Point E-001W, E-001A, E-001B, and E-001C.

Constructed Marsh, Moorhen Marsh. The Discharger owns and manages 20 acres of constructed marsh land consisting of interconnected marsh ponds and marsh habit wetlands that provide bountiful wildlife habitat that includes plants, animals, fish, and invertebrates. The diversity of its habitat attracts over 123 species of resident and migratory birds.

Natural Marsh, McNabney Marsh. The constructed marsh water flows to Peyton Slough and combines with surface runoff to supply the downstream 137 acre natural marsh. The District owns approximately 68 acres of these wetlands, and, through a conservation easement agreement, manages another 69 acres of wetlands owned by East Bay Regional Park District. Flows from this natural marsh (McNabney Marsh) re-enter Peyton Slough to ultimately reach Carquinez Strait.

3. Peyton Slough Watershed, Receiving Water. The watershed of Peyton Slough is about 2 square miles in size, containing portions of a major oil storage and refinery complex, chemical plant, major freeway, urban streets, parking areas, a small residential development, and undeveloped open space and wetlands. Surface flow is generated through stormwater runoff from the above areas as well as treated wastewater from the Discharger's 20-acre constructed wetland.

While the Peyton Slough Watershed has provided reasonably good seasonally flooded habitat for shorebirds and waterfowl, long-term changes in water depth, period and frequency of inundation, and soil salinity, and oxidation-reduction potential, brought about by lack of adequate water control facilities, have caused many areas of its wetlands to become barren of vascular plants, or invaded by exotic, weedy, or less desirable plant species.

C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data – Discharge Point E-001

Effluent limitations contained in the previous permit for discharges from Discharge Point E-001, with compliance measured at Monitoring Location E-001, and representative monitoring data from the term of the previous permit are as follows:

Demonstra		Effluent Lim	itation	Monitoring Data (From 2003 – 2005)			
Parameter (units)	Average Monthly			Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge	
Biochemical Oxygen Demand (BOD ₅) (mg/L)	30	45		5.0	7.0		
BOD ₅ Monthly Removal (%)	85			85 (Lowest monthly)			
Total Suspended Solids (TSS) (mg/L)	30	45		3.0	4.0		
TSS Monthly Removal (%)	85			85 (Lowest monthly)			
Oil and Grease (mg/L)	10		20	Non-detect		Non- detect	
Settleable Matter (ml/l/hr)	0.1		0.2	Not Available		Not Available	
Ammonia (mg/L)	8	6 (Annual Average)		0.8	0.92 (Annual Average)		
pH (standard units)			6.0 (minimum) - 9.0 (maximum)	6.9 (minimum)		7.8	
Total coliform (May 1 – Oct 31) (MPN/100 ml)	23 (5 san	nple median)	240	10		500	
Total coliform (Nov 1 – Apr 31) (MPN/100 ml)	240 (5 sar	mple median)	10,000	23		240	
Acute Toxicity (% survival)	11-sample median not to fall below 90% and 11-sample 90 th percentile not to fall below 70% survival.			100 (11-sa: 85 (sing	,		
Zinc (µg/L)			70			20	
Zinc (After 8/16/05) (µg/L)			58			20	
Mercury (µg/L) (kg/month)			0.019 0.09			0.0123 <0.000	

D. Compliance Summary. The following tables summarize the number of effluent limitation exceedances at Discharge Point E-001 during the previous permit period.

Parameter	Number of Exceedances for the Year				
	2001	2002	2003	2004	2005
Total Coliform , Daily Maximum				1	
Mercury Effluent, Monthly Average	1				

E. Planned Changes – N/A

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order is issued pursuant to section 402 of the Federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (US EPA) and Chapter 5.5, Division 7 of the California Water Code (CWC). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4 of the CWC for discharges that are not subject to regulation under CWA section 402.

B. California Environmental Quality Act (CEQA)

This action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21100, et seq.) in accordance with Section 13389 of the CWC.

C. State and Federal Regulations, Policies, and Plans

- 1. Water Quality Control Plans. The Regional Water Board adopted a Water Quality Control Plan for the San Francisco Bay Basin (Region 2) (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. The Regional Water Board amended the Basin Plan (Resolution No. R2-2004-0003) on January 21, 2004. The State Water Board and the Office of Administrative Law approved these amendments on July 22, 2004, and October 4, 2004, respectively. The US EPA gave final approval to the amendment on January, 5, 2005.
 - a. **Beneficial Uses.** The Basin Plan at page 2-5 states that the beneficial uses of any specifically identified water body generally apply to its tributary streams. Peyton Slough is a tributary to Carquinez Strait, which ultimately flows to Suisun Bay. The Basin Plan does not specifically identify beneficial uses for Peyton Slough, but does identify present and potential uses for Carquinez Strait (and Suisun Bay), to which Peyton Slough is tributary. In addition, State Water Resources Control Board (State Water Board) Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board

assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan. Thus, beneficial uses applicable to Peyton Slough and Carquinez Strait are as follows:

Discharge Point	Receiving Water Name	Beneficial Use(s)
E-001	Peyton Slough, a tributary to Carquinez Strait	Estuarine Habitat (EST), Industrial Service Supply (IND), Fish Migration (MIG), Navigation (NAV), Preservation of Rare and Endangered Species (RARE), Fish Spawning (SPWN), Wildlife Habitat (WILD), Ocean, Commercial and Sport Fishing (COMM), Water Contact Recreation (REC-1), and Non-contact Water Recreation (REC-2).

b. **Basin Plan Prohibition 1.** The Basin Plan contains a prohibition of discharge (Table 4-1) that states in part "any wastewater which has particular constituents of concern to beneficial uses at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1; or into any non-tidal water, dead-end slough, similar confined waters, or immediate tributaries thereof." The Basin Plan further states that an exception to this prohibition will be considered for dischargers where the discharge is approved as a part of a reclamation project, or where "it can be demonstrated that net environmental benefits will be derived as a result of the discharge." In order to, in part, address these types of discharges, the Regional Water Board adopted Resolution 94-086 entitled "Policy on the Use of Wastewater to Create, Restore, and/or Enhance Wetlands."

In issuing the previous permit, the Regional Water Board determined that, pursuant to the Basin Plan and Resolution 94-086, the Discharger is exempt from the discharge prohibition for not receiving at least 10:1 dilution since the use of treated wastewater to the 20-acre constructed marsh is a reclamation project that has demonstrated a net environmental benefit, provided the Discharger continues to meet the terms and conditions of the permit. For this Order, the Regional Water Board continues this finding. This is because this Order establishes limits for priority pollutants that have the potential to threaten water quality, and requires that the Discharger ensure that the marsh meets water quality objectives in the Basin Plan.

- 2. **Thermal Plan.** The State Water Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for inland surface waters.
- 3. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** US EPA adopted the NTR on December 22, 1992, which was amended on May 4, 1995 and November 9, 1999, and the CTR on May 18, 2000, which was amended on February 13, 2001. These rules include water quality criteria for priority pollutants and are applicable to this discharge.
- 4. **State Implementation Policy.** On March 2, 2000, State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the US EPA through the NTR and to the priority pollutant objectives established by the Regional Water Boards in their basin plans, with the exception of the provision on alternate

test procedures for individual discharges that have been approved by US EPA Regional Administrator. The alternate test procedures provision was effective on May 22, 2000. The SIP became effective on May 18, 2000. The State Water Board subsequently amended the SIP, and the amendments became effective on July 31, 2005. The SIP includes procedures for determining the need for and calculating water quality-based effluent limitations (WQBELs), and requires Dischargers to submit data sufficient to do so.

- 5. **Antidegradation Policy.** Section 131.12 of 40 CFR requires that State water quality standards include an antidegradation policy consistent with the Federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16, which incorporates the requirements of the Federal antidegradation policy. Resolution 68-16 requires that existing water quality is maintained unless degradation is justified based on specific findings. As discussed in detail in this Fact Sheet, the permitted discharge is consistent with the antidegradation provision of 40 CFR §131.12 and State Water Board Resolution 68-16.
- 6. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and 40 CFR §122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. Some effluent limitations in this Order are less stringent that those in the previous permit. As discussed in this Fact Sheet, this relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and Federal regulations.
- 7. **Monitoring and Reporting Requirements.** Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWC authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement Federal and State requirements. This MRP is provided in Attachment E.

On August 6, 2001, Regional Water Board staff sent a letter to all permitted dischargers pursuant to Section 13267 of CWC requiring the submittal of effluent and receiving water data on priority pollutants (Attachment G).

- **D.** Impaired Water Bodies on CWA 303(d) List. On June 6, 2003, the US EPA approved a revised list of impaired water bodies prepared by the State (hereinafter referred to as the 303(d) list), prepared pursuant to provisions of Section 303(d) of the Federal CWA requiring identification of specific water bodies where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources. Suisun Bay (Section C.1 of this Fact Sheet) is listed as an impaired waterbody. The pollutants impairing Suisun Bay include chlordane, DDT, diazinon, dieldrin, dioxin compounds, furan compounds, mercury, nickel, PCBs, dioxin-like PCBs, and selenium. The SIP requires final effluent limitations for all 303(d)-listed pollutants to be based on total maximum daily loads and associated waste load allocations.
 - 1. **Total Maximum Daily Loads.** The Regional Water Board plans to adopt Total Maximum Daily Loads (TMDLs) for pollutants on the 303(d)-list in Suisun Bay in the next ten years.

Future review of the 303(d)-list for Suisun Bay may result in revision of the schedules or provide schedules for other pollutants.

- 2. **Waste Load Allocations.** The TMDLs will establish waste load allocations (WLAs) for point sources and load allocations (LAs) for non-point sources, and will result in achieving the water quality standards for the waterbodies. Final WQBELs for 303(d)-listed pollutants in this discharge will be based on WLAs contained in the respective TMDLs.
- 3. **Implementation Strategy.** The Regional Water Board's strategy to collect water quality data and to develop TMDLs is summarized below:
 - a. **Data Collection.** The Regional Water Board has given the dischargers the option to collectively assist in developing and implementing analytical techniques capable of detecting 303(d)-listed pollutants to at least their respective levels of concern or WQOs/WQC. This collective effort may include development of sample concentration techniques for approval by the US EPA. The Regional Water Board will require dischargers to characterize the pollutant loads from their facilities into the water-quality limited waterbodies. The results will be used in the development of TMDLs, and may be used to update or revise the 303(d)-list or change the WQOs/WQC for the impaired waterbodies including Suisun Bay.
 - b. **Funding Mechanism.** The Regional Water Board has received, and anticipates continuing to receive, resources from Federal and State agencies for TMDL development. To ensure timely development of TMDLs, the Regional Water Board intends to supplement these resources by allocating development costs among dischargers through the RMP or other appropriate funding mechanisms.
- E. Other Plans, Polices and Regulations N/A

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source discharges to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations; and other requirements in NPDES permits. There are two principal bases for effluent limitations: 40 CFR §122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 CFR §122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where numeric water quality objectives have not been established. Three options exist to protect water quality: 1) 40 CFR §122.44(d) specifies that WQBELs may be established using US EPA criteria guidance under CWA section 304(a); 2) proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information may be used; or 3) an indicator parameter may be established.

A. Discharge Prohibitions

1. **Prohibition III.A (No discharge other than that described in this Order)**. This prohibition is based on CWC Section 13260 that requires filing of a report of waste discharge

- (ROWD) before discharges occur. The Discharger submitted a ROWD for the discharges described in this order; therefore, discharges not described in this Order are prohibited.
- 2. **Prohibition III.B (No bypass of untreated wastewater).** This prohibition is the same as in the previous permit and is based on 40 CFR 122.41(m)(4).
- 3. **Prohibition III.C** (Average dry weather flow not to exceed 3.2 mgd). This prohibition is based on the historic reliable treatment capacity of the Facility. Exceedance of the Facility's average dry weather flow design capacity may result in lowering the reliability of achieving compliance with water quality requirements, unless the Discharger demonstrates otherwise through an antidegradation study. This prohibition is based on 40 CFR 122.41(1).

B. Technology-Based Effluent Limitations

1. **Scope and Authority.** Permit effluent limits for conventional pollutants are technology-based. Technology-based effluent limits are put in place to ensure that full secondary treatment is achieved by the Facility, as required under 40 CFR Part 133.102. Effluent limits in the section below (2. Applicable Technology-Based Effluent Limitations) for the conventional pollutants are defined by the Basin Plan, and are the same as in the previous permit with the exception of pH. For pH, the previous permit included an instantaneous minimum and maximum of 6.0 and 9.0; however, these limits are inconsistent with the Basin Plan

2. Applicable Technology-Based Effluent Limitations

Summary of Technology-based Effluent Limitations Discharge Point E-001

		Effluent Limitations						
Parameter	Units	Average	Average	Maximum	Instantaneous	Instantaneous		
		Monthly	Weekly	Daily	Minimum	Maximum		
Biochemical Oxygen Demand 5-day @ 20°C (BOD ₅)	mg/L	30	45	1				
Total Suspended Solids (TSS)	mg/L	30	45	1				
Oil and Grease (O&G)	mg/L	10		20				
рН	Standard Units				6.5	8.5		

- a. **BOD**₅, **TSS**, **O&G**, and **Settleable Matter**. The effluent limits for BOD₅, TSS, and Oil and Grease, are technology-based limits representative of, and intended to ensure, adequate and reliable advanced secondary level wastewater treatment. These technology based limits are at least as stringent as the Basin Plan requirements (Chapter 4, Table 4-2). The technology based limits are unchanged from the previous permit, except daily maximum limits and settleable matter limits are no longer required based on the 2005 Basin Plan amendment. General compliance has been demonstrated by existing facility performance.
- b. **Total Ammonia.** The effluent limitations for total ammonia are unchanged from the previous permit, which was based on a slough survey study conducted in 1986-87. This

study concluded that total ammonia removal from the discharge is not necessary for maintenance of beneficial uses in Peyton Slough. Based on the results of this study, previous Orders replaced the receiving water objective for unionized ammonia with an effluent limit for total ammonia. This effluent limit was established in the order to maintain the current ammonia loading to the slough. The Facility's ability to comply with these limitations has been demonstrated by existing plant performance.

- c. **pH.** The effluent limitations for pH are a standard advanced secondary level treatment requirement, and are unchanged from the previous permit. These limitations are based on the Basin Plan requirements (Chapter 4, Table 4-2), which is derived from Federal requirements (40 CFR 133.102). The Facility's ability to comply with these limitations has been demonstrated by existing plant performance. The Discharger may elect to use continuous on-line monitoring system(s) for measuring pH; in this case, 40 CFR 401.17, and BPJ are the basis for the compliance provisions for pH limitations.
- d. **85% Removal.** The effluent limitations for BOD and TSS 85% monthly removal are technology-based. They are unchanged from the previous permit and are based on Basin Plan requirements, derived from Federal requirements (40 CFR 133.102; definition in 133.101). Compliance has been demonstrated by existing facility performance.
- e. **Total Coliform Bacteria.** The total coliform limits are unchanged from the previous permit and are based on Basin Plan requirements, Table 4-2. The purpose of these effluent limits is to ensure adequate disinfection of the discharge in order to protect beneficial uses of the receiving waters.

Effluent limits based on WQOs for bacteriological parameters for receiving water beneficial uses are given in terms of parameters which serve as surrogates for pathogenic organisms. The traditional parameter in this regard is coliform bacteria, either as total coliform or as fecal coliform. The Regional Water Board can allow the Discharger to use alternate limitations of bacteriological quality if the Discharger can establish to the satisfaction of the Regional Water Board that the use of the fecal coliform or enterococci limitations will not result in unacceptable adverse impacts on the beneficial uses of the receiving water.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

a. As specified in 40 CFR §122.44(d)(1)(i), permits are required to include WQBELs for pollutants (including toxicity) that are or may be discharged at levels that cause, have reasonable potential to cause, or contribute to an excursion above any state water quality standard (Reasonable Potential). The process for determining Reasonable Potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other State plans and policies, or water quality criteria contained in the CTR and NTR.

- b. NPDES regulations, the SIP, and US EPA's March 1991 Technical Support Document for Water Quality-Based Toxics Control (the TSD) provide the basis to establish Maximum Daily Effluent Limitations (MDELs), and Average Monthly Effluent Limitations (AMELs).
 - 1) **NPDES Regulations.** NPDES regulations at 40 CFR Part 122.45(d) state: "For continuous discharges all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall *unless impracticable* be stated as average weekly and average monthly discharge limitations for publicly owned treatment works. (POTWs)"
 - 2) **SIP.** The SIP (page 8, section 1.4) requires WQBELs be expressed as MDELs and AMELs. For aquatic life-based calculations (only), the amended SIP indicates MDELs are to be used in place of average weekly limitations for POTWs.
 - 3) **TSD.** The TSD (p. 96) states a maximum daily limitation is appropriate for two reasons:
 - a) The basis for the 7-day average for POTWs derives from the secondary treatment requirements. This basis is not related to the need for assuring achievement of water quality standards.
 - b) The 7-day average, which could comprise up to seven or more daily samples, could average out peak toxic concentrations, and therefore, the discharge's potential for causing acute toxic effects would be missed. A maximum daily limitation would be toxicologically protective of potential acute toxicity impacts.
- c. Based on the above three factors, MDELs are used in this Order to protect against acute water quality effects. It is impracticable to use weekly average limitations to guard against acute effects. Although weekly averages are effective for monitoring the performance of biological wastewater treatment plants, the MDELs are necessary for preventing fish kills or mortality to aquatic organisms.
- 2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

 The WQC and WQOs applicable to the receiving waters for this discharge are from the Basin Plan, the US EPA's May 18, 2000 Water Quality Standards, Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California (the California Toxics Rule, or the CTR), and the US EPA's National Toxics Rule (the NTR).
 - a. **Basin Plan**. The Basin Plan specifies numeric WQOs for 10 priority toxic pollutants, as well as narrative WQOs for toxicity and bioaccumulation in order to protect beneficial uses. The pollutants for which the Basin Plan specifies numeric objectives are arsenic, cadmium, chromium (VI), copper in freshwater, lead, mercury, nickel, silver, zinc, and cyanide (see also c., below). The narrative toxicity objective states in part "[a]ll waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms." The bioaccumulation objective states in part "[c]ontrollable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life.

Effects on aquatic organisms, wildlife, and human health will be considered." Effluent limitations and provisions contained in this Order are designed to implement these objectives, based on available information.

- b. **CTR.** The CTR specifies numeric aquatic life criteria for 23 priority toxic pollutants and numeric human health criteria for 57 priority toxic pollutants. These criteria apply to inland surface waters and enclosed bays and estuaries such as here, except that where the Basin Plan's Tables 3-3 and 3-4 specify numeric objectives for certain of these priority toxic pollutants, the Basin Plan's numeric objectives apply over the CTR (except in the South Bay south of the Dumbarton Bridge).
- c. **NTR.** The NTR established numeric aquatic life criteria for selenium, numeric aquatic life and human health criteria for cyanide, and numeric human health criteria for 34 toxic organic pollutants for waters of San Francisco Bay upstream to, and including, Suisun Bay and the Delta. This includes the receiving water for this Discharger.
- d. **TSD**. Where numeric objectives have not been established or updated in the Basin Plan, 40 CFR Part 122.44(d) specifies that WQBELs may be set based on US EPA criteria, supplemented where necessary by other relevant information, to attain and maintain narrative WQOs to fully protect designated beneficial uses. Regional Water Board staff used best professional judgment (BPJ) to determine the WQOs, WQCs, WQBELs, and calculations contained in this Order as defined by the TSD.
- e. **Receiving Water Salinity and Hardness.** The Basin Plan states that the salinity characteristics (i.e., freshwater vs. saltwater) of the receiving water shall be considered in determining the applicable WQC. It further states that freshwater criteria shall apply to discharges to waters with salinities equal to or less than one ppt at least 95 percent of the time. Saltwater criteria shall apply to discharges to waters with salinities equal to or greater than 10 ppt at least 95 percent of the time in a normal water year. For discharges to water with salinities in between these two categories, or tidally influenced freshwaters that support estuarine beneficial uses, the criteria shall be the lower of the salt or freshwater criteria, (the latter calculated based on ambient hardness), for each substance.
 - 1) Receiving Water Salinity. The receiving water for the subject discharge is Peyton Slough, a small north-flowing tributary to Carquinez Strait, which is classified as estuarine. Carquinez Strait is a tidally influenced waterbody, and is defined as supporting estuarine habitat in the Basin Plan's definition for estuarine water. Therefore, the effluent limitations specified in this Order for discharges to Peyton Slough, and ultimately Carquinez Strait are based on the more stringent of the marine and freshwater Basin Plan WQOs and CTR and NTR WQC
 - 2) **Hardness.** Some WQOs and WQC are hardness dependent. The Discharger sampled the receiving water near Discharge Point E-001 to the constructed marsh and near the marsh discharge to Peyton Slough from June 2001 through June 2005, for a total of 89 hardness data values. In determining the WQOs and WQC for this Order, the Regional Water Board used a hardness value of 170 mg/L, which is the minimum hardness value observed during this sampling period.

- 3. **Determining the Need for WQBELs.** Assessing whether a pollutant has Reasonable Potential is the fundamental step in determining whether or not a WQBEL is required.
 - a. **Reasonable Potential Analysis (RPA).** For priority pollutants, Regional Water Board staff analyzed the Discharger's self-monitoring effluent data and ambient background data, and considered the nature of the Facility's operations to determine if the discharges from Discharge Point E-001 demonstrates Reasonable Potential. Using the method prescribed in Section 1.3 of the SIP, Regional Water Board staff compared the effluent data with numeric and narrative WQOs in the Basin Plan and numeric WQC from US EPA, the NTR, and the CTR ("Reasonable Potential Analysis" or "RPA"). The Basin Plan objectives and CTR criteria are shown in Attachment 1 of this Fact Sheet.

The RPA identifies the observed maximum effluent concentration (MEC) in the effluent for each pollutant, based on effluent concentration data. There are three triggers in determining Reasonable Potential:

- 1) The first trigger is activated if the MEC is greater than the lowest applicable WQO (MEC≥ WQO), which has been adjusted, if appropriate, for pH, hardness, and translator data. If the MEC is greater than the adjusted WQO, then that pollutant has reasonable potential, and a WQBEL is required.
- 2) The second trigger is activated if the observed maximum ambient background concentration (B) is greater than the adjusted WQO (B>WQO) and the pollutant was detected in any of the effluent samples.
- 3) The third trigger is activated if a review of other information determines that a WQBEL is required to protect beneficial uses, even though both MEC and B are less than the WQO/WQC. A limitation may be required under certain circumstances to protect beneficial uses.
- b. **Effluent Data.** The Regional Water Board's August 6, 2001 letter titled *Requirement for Monitoring of Pollutants in Effluent and Receiving Water to Implement New Statewide Regulations and Policy* (hereinafter referred to as the August 6, 2001 Letter) to all permittees, formally required the Discharger (pursuant to Section 13267 of the CWC) to initiate or continue to monitor for the priority pollutants using analytical methods that provide the best detection limits reasonably feasible. Regional Water Board staff analyzed this effluent data to determine if the discharge has Reasonable Potential. The RPA was based on the effluent monitoring data collected by the Discharger from 2002 through 2005.
- c. **Ambient Background Data.** Ambient background values are used in the RPA and in the calculation of effluent limitations. For the RPA, ambient background concentrations are the observed maximum detected water column concentrations. The SIP states that for calculating WQBELs, ambient background concentrations are either the observed maximum ambient water column concentrations or, for criteria/objectives intended to protect human health from carcinogenic effects, the arithmetic mean of observed ambient water concentrations. The RMP station at Yerba Buena Island, located in the Central Bay, has been sampled for most of the inorganic (CTR constituent numbers 1–15) and some of

the organic (CTR constituent numbers 16–126) toxic pollutants. Not all the constituents listed in the CTR were analyzed by the RMP during this time. These data gaps are addressed by the Regional Water Board's August 6, 2001 Letter, which also requires the dischargers to conduct ambient background monitoring and effluent monitoring for those constituents not currently sampled by the RMP and to provide this technical information to the Regional Water Board.

On May 15, 2003, a group of several San Francisco Bay Region Dischargers (known as the Bay Area Clean Water Agencies, or BACWA) submitted a collaborative receiving water study, entitled the *San Francisco Bay Ambient Water Monitoring Interim Report*. This study includes monitoring results from sampling events in 2002 and 2003 for the remaining priority pollutants not monitored by the RMP. The RPA was conducted and the WQBELs were calculated using RMP data from 1993 through 2003 for inorganics and organics at the Yerba Buena Island RMP station, and additional data from the BACWA *Ambient Water Monitoring: Final CTR Sampling Update Report* for the Yerba Buena Island RMP station.

d. **RPA Determination.** The MECs, WQOs/WQC, bases for the WQOs/WQC, background concentrations used, and Reasonable Potential conclusions from the RPA are listed in the following table for all constituents analyzed from Discharge Point E-001. Some of the constituents in the CTR were not determined because of the lack of an objective/criteria or effluent data. Based on the RPA methodology in the SIP, some constituents did not demonstrate Reasonable Potential. The RPA results are shown below and in Attachment 2 of this Fact Sheet. The pollutants that exhibit Reasonable Potential at Discharge Point E-001 are copper, mercury, cyanide, and dioxin TEQ.

CTR#	PRIORITY POLLUTANTS	MEC or Minimum DL ¹	Governing WQO/WQC	Maximum Background or Minimum DL ^{1, 2}	RPA Results ³
		(µg/L)	(µg/L)	(μg/L)	
1	Antimony	1.22	4300	1.8	No
2	Arsenic	1.8	36	2.46	No
3	Beryllium	0.02	No Criteria	0.215	Undetermined
4	Cadmium	0.41	3.73	0.1268	No
5b	Chromium (VI)	7	11.43	4.4	No
6	Copper	8.8	3.7	2.45	Yes
7	Lead	3.3	6.25	0.8	No
3	Mercury	0.013	0.025	0.0086	Yes
)	Nickel	5.9	8.28	3.7	No
10	Selenium	2	5.0	0.39	No
11	Silver	1.04	1.07	0.0516	No
2	Thallium	0.1	6.3	0.21	No
13	Zinc	34	85.6	4.4	No
14	Cyanide	5.5	1.0	0.4	Yes
16	2,3,7,8-TCDD	1.0E-09	1.4E-08	1.0E-09	Cannot Determine
	Dioxin TEQ	3.4E-08	1.4E-08	7.1E-08	Yes
17	Acrolein	1	780	0.5	No
18	Acrylonitrile	1	0.66	0.03	No
19	Benzene	0.3	71	0.05	No
20	Bromoform	0.2	360	0.5	No
21	Carbon Tetrachloride	0.42	4.4	0.06	No
22 23	Chlorobenzene	0.3	21000	0.5	No
23	Chlorodibromomethane	0.3	34	0.05	No
24	Chloroethane	0.34	No Criteria	0.5	Undetermined
25	2-Chloroethylvinyl Ether	0.32	No Criteria	0.5	Undetermined
26	Chloroform	0.06	No Criteria	0.5	Undetermined
27	Dichlorobromomethane	0.2	46	0.05	No
28	1,1-Dichloroethane	0.5	No Criteria	0.05	Undetermined
29	1,2-Dichloroethane	0.5	99	0.04	No
30	1,1-Dichloroethylene	0.5	3.2	0.5	No

CTR#	PRIORITY	MEC or	Governing	Maximum Background or	RPA Results ³
	POLLUTANTS	Minimum DL ¹	WQO/WQC	Minimum DL ^{1, 2}	
		(µg/L)	(µg/L)	(μg/L)	
31	1,2-Dichloropropane	0.5	39	0.05	No
32	1,3-Dichloropropylene	0.5	1700	Not Available	No
	Ethylbenzene	0.5 0.5	29000 4000	0.5	No No
34 35	Methyl Bromide Methyl Chloride	0.5	No Criteria	0.5 0.5	Undetermined
	Methylene Chloride	0.3	1600	0.5 0.5	No
37	1,1,2,2-Tetrachloroethane	0.5	11	0.05	No
	Tetrachloroethylene	0.5	8.85	0.05	No
39	Toluene	0.5	200000	0.3	No
40	1,2-Trans-Dichloroethylene	0.5	140000	0.5	No
41	1,1,1-Trichloroethane	0.5	No Criteria	0.5	Undetermined
42	1,1,2-Trichloroethane	0.5	42	0.05	No
43	Trichloroethylene	0.5	81	0.5	No
44	Vinyl Chloride	0.5	525	0.5	No
45	2-Chlorophenol	5	400	1.2	No
46 47	2,4-Dichlorophenol 2,4-Dimethylphenol	5 2	790 2300	1.3 1.3	No No
	2-Methyl-4,6-Dinitrophenol	5	765	1.3	No No
	2,4-Dinitrophenol	5	14000	0.7	No No
	2-Nitrophenol	5	No Criteria	1.3	Undetermined
	4-Nitrophenol	5	No Criteria	1.6	Undetermined
52	3-Methyl-4-Chlorophenol	1	No Criteria	1.1	Undetermined
53	Pentachlorophenol	1	7.9	1	No
54	Phenol	1	4600000	1.3	No
	2,4,6-Trichlorophenol	5	6.5	1.3	No
56	Acenaphthene	0.3	2700	0.0015	No
57	Acenaphthylene	0.2	No Criteria	0.00053	Undetermined
58	Anthracene	0.3	110000	0.0005	No
59 60	Benzidine	5 0.3	0.00054 0.049	0.0015 0.0053	No No
61	Benzo(a)Anthracene Benzo(a)Pyrene	0.3	0.049	0.0053	No No
62	Benzo(a)Fyrene Benzo(b)Fluoranthene	0.3	0.049	0.0029	No No
63	Benzo(ghi)Perylene	0.1	-No Criteria	0.0027	Undetermined
64	Benzo(k)Fluoranthene	0.3	0.049	0.0027	No
	Bis(2-Chloroethoxy)Methane	5	No Criteria	0.3	Undetermined
	Bis(2-Chloroethyl)Ether	1	1.4	0.3	No
67	Bis(2-Chloroisopropyl)Ether	2	170000	Not Available	No
68	Bis(2-Ethylhexyl)Phthalate	2	5.9	0.5	Yes
	4-Bromophenyl Phenyl Ether	5	No Criteria	0.23	Undetermined
	Butylbenzyl Phthalate	5	5200	0.52	No
71	2-Chloronaphthalene	5	4300	0.3	No
72 73	4-Chlorophenyl Phenyl Ether Chrysene	5 0.3	No Criteria 0.049	0.3 0.0024	Undetermined No
73 74	Dibenzo(a,h)Anthracene	0.3	0.049	0.0024	No No
7 4 75	1,2 Dichlorobenzene	0.1	17000	0.8	No
76	1,3 Dichlorobenzene	0.6	2600	0.8	No
77	1.4 Dichlorobenzene	0.6	2600	0.8	No
78	3,3-Dichlorobenzidine	5	0.077	0.001	No
79	Diethyl Phthalate	2.5	120000	0.24	No
80	Dimethyl Phthalate	2	2900000	0.24	No
81	Di-n-Butyl Phthalate	5	12000	0.5	No
82	2,4-Dinitrotoluene	5	9.1	0.27	No
83	2,6-Dinitrotoluene	5	No Criteria	0.29	Undetermined
84	Di-n-Octyl Phthalate	5	No Criteria	0.38	Undetermined
85 86	1,2-Diphenylhydrazine	1	0.54	0.0037	No No
86 87	Fluoranthene Fluorene	0.05 0.1	370 14000	0.011 0.00208	No No
87 88	Hexachlorobenzene	0.1	0.00077	0.00208	No No
39	Hexachlorobutadiene	1	50	0.0000202	No No
	Hexachlorocyclopentadiene	5	17000	0.31	No
	Hexachloroethane	1	8.9	0.31	No
	Indeno(1,2,3-cd) Pyrene	0.05	0.049	0.004	No
93	Isophorone	1	600	0.3	No
94	Naphthalene	0.2	No Criteria	0.0023	Undetermined
95	Nitrobenzene	1	1900	0.25	No
96	N-Nitrosodimethylamine	5	8.1	0.3	No
97	N-Nitrosodi-n-Propylamine	5	1.4	0.001	No
98	N-Nitrosodiphenylamine	1	16	0.001	No
	Phenanthrene	0.05	No Criteria	0.0061	Undetermined

CTR#	PRIORITY	MEC or	Governing	Maximum Background or	RPA Results ³
	POLLUTANTS	Minimum DL ¹	WQO/WQC	Minimum DL ^{1, 2}	
		(µg/L)	(µg/L)	(μg/L)	
100	Pyrene	0.05	11000	0.0051	No
101	1,2,4-Trichlorobenzene	5	No Criteria	0.3	Undetermined
102	Aldrin	0.005	0.00014	Not Available	No
103	alpha-BHC	0.01	0.013	0.000496	No
104	beta-BHC	0.005	0.046	0.000413	No
105	gamma-BHC	0.01	0.063	0.0007034	No
106	delta-BHC	0.005	No Criteria	0.000042	Undetermined
107	Chlordane	0.02	0.00059	0.00018	No
108	4,4'-DDT	0.01	0.00059	0.000066	No
109	4,4'-DDE	0.01	0.00059	0.000693	No
110	4,4'-DDD	0.01	0.00084	0.000313	No
111	Dieldrin	0.01	0.00014	0.000264	No
112	alpha-Endosulfan	0.01	0.0087	0.000031	No
113	beta-Endosulfan	0.01	0.0087	0.000069	No
114	Endosulfan Sulfate	0.01	240	0.0000819	No
115	Endrin	0.01	0.0023	0.000036	No
116	Endrin Aldehyde	0.01	0.81	Not Available	No
117	Heptachlor	0.01	0.00021	0.000019	No
118	Heptachlor Epoxide	0.01	0.00011	0.000094	No
119-125	PCBs sum	0.1	0.00017	Not Available	No
126	Toxaphene	0.5	0.0002	Not Available	No
	Total PAHs	0.17	15.0	0.26	No
	Chlorpyrifos	0.5			
	Diazinon	0.6			

- [1] Concentration in bold is the actual detected maximum concentration, otherwise the concentration shown is the maximum detection level.
- Maximum Background = Not Available, if there is no monitoring data for this constituent.
- [2] [3] RPA Results = Yes, if MEC > WQO/WQC,
 - = No, if MEC or all effluent concentration non-detect < WQO/WQC,
 - = Undetermined, if no objective promulgated, and
 - = Cannot determine, due to lack of data.

e. RPA Considerations for Specific Pollutants

1) Copper.

a) Copper WQO. The marine chronic and acute criteria for dissolved copper adopted in the CTR and Basin Plan are defined as 3.1 and 4.8 µg/L multiplied by a Water Effects Ratio (WER) (40 CFR 131.38 (b) and (c)(4)(i) and (iii)). The default value for the WER is 1.0 unless a WER has been developed as set forth in US EPA's WER guidance (Interim Guidance on Determination and Use of Water Effect Ratios, US EPA Office of Water, EPA-823-B-94-001, February 1994). For San Francisco Bay (north of Dumbarton Bridge), a WER of 2.4 was developed in accordance with this US EPA WER guidance [North of Dumbarton Bridge Copper and Nickel Site-Specific Objective (SSO) Derivation (Clean Estuary Partnership December 2004)]. While the Discharger routes treated effluent to Peyton Slough, the WER value of 2.4 is applicable because (a) Peyton Slough is a tidally influenced water body, and (b) WER values derived from low salinity data from the Bay (around 5 ppt) are indistinguishable from higher salinity data (25 ppt) [Copper and Nickel North of the Dumbarton Bridge Step1: Impairment Assessment Report Ambient Concentrations and WERs (EOA Inc. and Larry Walker and Assoc. September 2000 through June 2001)].

- b) **RPA Results.** This Order establishes effluent limitations for copper because the 8.8 μg/L MEC exceeds the governing WQC of 3.7 μg/L, demonstrating Reasonable Potential by Trigger 1. This governing WQC is based on the CTR salt water chronic criteria (WER = 1.0) for the protection of aquatic life. (The WER of 2.4 is only used for calculating limits, not for determining Reasonable Potential).
- 2) **Mercury.** As previously described in Section III.C.1 of this Fact Sheet, Peyton Slough, the receiving water, is a tributary to Suisun Bay. This Order establishes effluent limitations for mercury by Trigger 3 because mercury is detected in the effluent, and Suisun Bay is listed as impaired by mercury. As such, effluent limitations are necessary to limit the mercury loading into the Bay. This governing WQO is based on the Basin Plan salt water protection of aquatic life.
- 3) **Cyanide.** This Order establishes effluent limitations for cyanide because the 5.5 μg/L MEC exceeds the governing WQC of 1 μg/L, demonstrating Reasonable Potential by Trigger 1. This governing WQC is based on NTR salt water/ fresh water chronic criteria for the protection of aquatic life.

4) Dioxin Equivalents (TEQ).

- a) **Dioxin TEQ WQC.** The CTR establishes a numeric human health WQC of 0.014 picogram per liter (pg/L) for 2,3,7,8-tetrachlorinated dibenzo-p-dioxin (2,3,7,8-TCDD) based on consumption of aquatic organisms. The preamble of the CTR states that California NPDES permits should use toxicity equivalents (TEQs) where dioxin-like compounds have Reasonable Potential with respect to narrative criteria. The preamble further states that US EPA intends to use the 1998 World Health Organization Toxicity Equivalence Factor (TEF) scheme in the future and encourages California to use this scheme in State programs. In addition, the CTR preamble states US EPA's intent to adopt revised WQC guidance subsequent to their health reassessment for dioxin-like compounds. The SIP applies to all toxic pollutants, including dioxins and furans. The Regional Water Board staff used TEQs to translate the narrative WQOs to numeric WQOs for the other 16 congeners.
- b) **Basin Plan.** The Basin Plan contains a narrative WQO for bioaccumulative substances:

"Many pollutants can accumulate on particulates, in sediments, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life. Effects on aquatic organisms, wildlife, and human health will be considered."

This narrative WQO applies to dioxin and furan compounds, based in part on the consensus of the scientific community that these compounds associate with particulates, accumulate in sediments, and bioaccumulate in the fatty tissue of fish and other organisms.

- c) **303-d List.** US EPA's 303(d) listing determined that the narrative objective for bioaccumulative pollutants was not met because of the levels of dioxins and furans in the fish tissue.
- d) **RPA Results**. The dioxin TEQ MEC of 0.34 pg/L exceeds the 2,3,7,8-TCDD 0.014 pg/L, demonstrating reasonable potential to cause or contribute to exceedances of the narrative objective.
- e) **Dioxin Effluent Limits**. The dioxin-TEQ WQBELs calculated using SIP procedures are 1.4 x 10⁻⁸ µg/L average monthly and 2.8 x 10⁻⁸ µg/L maximum daily. The final effluent limitations for dioxin-TEQ are included in the Fact Sheet as a point of reference, and shall become effective ten years from the effective date of this Order, or when the Regional Water Board amends the limitations based on a WLA in the TMDL. An interim effluent limitation for dioxin-TEQ is not included because there is insufficient data to determine a performance-based effluent limitation, and the previous permit does not include a limit.
- e. **Pollutants that no Longer Trigger Reasonable Potential: Zinc.** The previous permit contained effluent limits for zinc. As illustrated in section Iv.C.3.d of this Fact Sheet, zinc does not have a reasonable potential to cause an exceedance of the WQOs or WQC. Accordingly, this Order does not propose to include effluent limitations for this constituent.
- 4. **WQBEL Calculations.** The final WQBELs were developed for the toxic and priority pollutants that were determined to have reasonable potential to cause or contribute to exceedences of the WQOs or WQC. Final WQBELs were calculated based on appropriate WQOs/WQC, background concentrations at Yerba Buena Island RMP Station, and the appropriate procedures specified in Section 1.4 of the SIP (See the following section 4.b). As previous discussed in this Fact Sheet (refer to section III.C.1.b.) the wastewater does not receive a minimum initial dilution of at least 10:1, and therefore, the WQBELs were calculated assuming no dilution (D=0). The WQOs or WQC used for each pollutant with Reasonable Potential, for which a WQBEL was derived, is indicated in the following table:

Pollutant	Chronic WQO/WQC	Acute WQO/WQC	Human Health WQC	Basis of WQO/WQC 1
	(µg/L)	(µg/L)	(µg/L)	
Copper (Total)	9.0	13.9	-	CTR
Mercury	0.025	2.1	0.051	BP
Cyanide	1	1	220,000	NTR

[1] BP = Basin Plan, CTR = California Toxics Rule, NTR = National Toxics Rule,

a. **Shallow Water Discharge.** The treated wastewater is discharged to the interconnected ponds within the Discharger's 20 acre constructed marsh. The marsh water flows over a weir into Peyton Slough. Due to the tidal nature of Peyton Slough, the discharge is classified by the Regional Water Board as a shallow water discharge. Therefore, effluent limitations are calculated assuming no dilution. This is also consistent with the previous permit.

The Basin Plan, Shallow Water Discharges section (p. 4-12), specifies the issues that must be addressed to support requests for dilution credit. Shallow water dischargers may apply to the Regional Water Board for exceptions to the assigned dilution ratio of D=0 (and thus the shallow water effluent limitations) based on demonstration of compliance with water quality objectives in the receiving waters and implementation of an aggressive pretreatment and source control program. The Discharger did not provide any information that demonstrates to Regional Water Board staff that a dilution credit is appropriate. Therefore, a dilution credit value was not used in the calculation of the WQBELs.

b. **Effluent Limit Calculations.** The following effluent limit calculations were developed for the toxic and priority pollutants that were determined to have reasonable potential to cause or contribute to exceedances of the WQOs or WQC. These effluent limitations were calculated based on appropriate WQOs/WQC, background concentrations at Yerba Buena Island RMP Station, and the appropriate procedures specified in Section 1.4 of the SIP as shown in the following table.

PRIORITY POLLUTANTS	Copper	Mercury	Cyanide	Alternate Cyanide (SSO)
Design and Criteria true	CTD CW	BP SW	NITO CVA	NTD CW
Basis and Criteria type	CTR SW	(4-d, 1-hr avg)	NIK-SW	NTR – SW
Lowest Dissolved WQO	3.7	0.025	1	2.9
Dilution Factors (D) (If applicable)	0	0	0	
Water Effect Ratio (WER)	2.4	0	0	
no. of samples per month	4	4	4	
Aquatic life criteria analysis required? (Y/N)	Y	Y	Y	Y
HH criteria analysis required? (Y/N)	N	Y	Y	Y
Total Applicable Acute WQO	13.9	2.1	1	9.4
Total Applicable Chronic WQO	9.0	0.025	1	2.9
HH criteria		0.051	220000	220000
Background (max conc for Aquatic Life calc)	2.45	0.0086	0.4	0.4
Background (avg conc for HH calc)			0.21	
Is the pollutant Bioaccumulative(Y/N)? (e.g., Hg)	N	Y	N	
ECA acute	13.9	2.1	1	40.9
ECA chronic	9.0	0.025	1	11.65
ECA HH		0.051	220000	1000000
No. of data points <10 or atleast 80% reported non detect?	N	N	Υ	Υ
avg of data points	5.71	0.0055	1.16	1.16
SD	1.33	0.0025	0.98	0.98
CV calculated	0.23	0.46	0.85	0.85
CV (Selected) - Final	0.23	0.46	0.85	0.85
ECA acute mult99	0.61	0.4	0.24	0.24
ECA chronic mult99	0.77	0.61	0.42	0.42
LTA acute	8.4	0.83	0.24	9.66
LTA chronic	6.9	0.015	0.42	4.91
minimum of LTAs	6.9	0.015	0.24	4.91
AMEL mult95	1.2	1.42	1.8	1.8
MDEL mult99	1.65	2.52	4.23	4.23
AMEL (aq life)	8.3	0.021	0.425	8.83
MDEL(aq life)	11.4	0.038	1	20.78
AMEL (human hith)		0.051	220000	1000000
MDEL (human hlth)		0.09	517842	2000000
Current limits in permit (daily)	None	0.019	None	None
Final limit – AMEL	8.3		0.42	
Final limit – MDEL	11.4		1.0	21
Max Effl Conc (MEC), 2002-2005	8.8	0.013	5.5	
Feasibility to comply?	Yes	Yes	No	Yes
Interim Limit?	No	No	Yes	

c. Alternate Final Effluent Limitation - Cyanide.

As described in *Draft Staff Report on Proposed Site-Specific Water Quality Objectives* and *Effluent Limit Policy for Cyanide for San Francisco Bay*, dated November 10, 2005, the Regional Water Board is proposing to develop site-specific criteria for cyanide. In this report, the proposed site-specific criteria for marine waters are $2.9 \,\mu g/L$ as a four-day average, and $9.4 \,\mu g/L$ as a one-hour average. Based on these assumptions, and the Discharger's current cyanide data (coefficient of variation of 0.85), final water quality

based effluent limits for cyanide will be $21 \mu g/L$ as a Maximum Daily, and $8.8 \mu g/L$ as an Monthly Average. These alternative limits will become effective only if the site-specific objective adopted for cyanide contains the same assumptions in the staff report, dated November 10, 2005.

d. Summary of Water Quality-based Effluent Limitations – Discharge Point E-001

		Final Effl	uent Limits	Interim Effluent Limits		
Parameter	Units	Daily Maximum (MDEL)	Monthly Average (AMEL)	Daily Maximum	Monthly Average	
Copper	μg/L	11.4	8.3			
Mercury	μg/L	0.038	0.021			
Cyanide	μg/L	1.0	0.42	6		
Alternate Final Cyanide (SSO)	μg/L	21	8.8		-	

- 5. Whole Effluent Toxicity (WET). The Basin Plan specifies a narrative objective for toxicity, requiring that all waters shall be maintained free of toxic substances in concentrations that are lethal to or produce other detrimental response on aquatic organisms. Detrimental response includes but is not limited to decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alternations in population, community ecology, or receiving water biota. The whole effluent toxicity limits contained in this Order are necessary to ensure that this objective is protected.
 - a. **Whole Effluent Acute Toxicity.** This Order includes effluent limits for whole-effluent acute toxicity that are unchanged from the previous permit, and is based on the Basin Plan (Table 4-2).
 - b. Whole Effluent Chronic Toxicity. To determine if the discharge exhibits chronic toxicity, this permit requires that the Discharger conduct screening phase monitoring before the next permit reissuance. This is a reasonable balance of monitoring for the facility since it is unlikely to exhibit significant chronic toxicity in the receiving water. This is because the Discharger (1) has advanced secondary treatment, (2) discharges on average around 2 mgd, and (3) does not accept significant amounts of industrial waste.

D. Final Effluent Limitations

a. Summary of Final Effluent Limitations – Discharge Point E-001

		Effluent Limitations							
Parameter	Units	Average	Average	Average	Maximum	Instantaneous	Instantaneous		
		Annual	Monthly	Weekly	Daily	Minimum	Maximum		
BOD_5	mg/L		30	45					
TSS	mg/L		30	45	-				
O&G	mg/L		10		20				
pH	Standard Units				-	6.5	8.5		
Mercury	μg/L		0.021		0.038				
Copper	μg/L		8.3		11.4				
Cyanide	/I		0.42		1.0				
Effective Starting April 28, 2010	μg/L		0.42		1.0				
Total Ammonia	mg/L	6.0	8.0						
85% Removal, BOD ₅ and TSS	%		85						
Total Coliform	MDN/100 mal		23		240				
May 1 st through October 31 st	MPN/100 ml		23		240				
Total Coliform	MPN/100 ml		240		10000				
November 1 st through April 31 st	WIFIN/100 MI	-	240		10000				

b. **Anti-backsliding/Antidegradation.** All conventional pollutant limitations (i.e. BOD₅, TSS, O&G, Total Ammonia, Total Coliform, and pH) are defined by the Basin Plan, and are the same as in the previous permit, and therefore, the anti-backsliding and antidegradation requirements are satisfied. The previous permit included only interim monthly average limitations for mercury and zinc of 0.019 μg/L and 70 μg/L, respectively, and does not specify final WQBELs. Antibacksliding does not apply to interim limits and since there were no final WQBELs in the previous permit to compare with the new WQBELs, there is no backsliding.

E. Interim Effluent Limitations

- Feasibility Evaluation. The Discharger submitted an infeasibility to comply report for Discharge Point E-001 dated January 17, 2006, for copper, and cyanide (Infeasibility Study). The Infeasibility Study asserts that the Discharger cannot immediately comply with the copper and cyanide WQBELs. Regional Water Board staff used the Discharger's selfmonitoring data from January 2002 through December 2005 to confirm the Discharger's assertion of infeasibility.
 - a. **Copper.** For copper, Regional Water Board staff statistically analyzed the data to compare the mean, 95th percentile, and 99th percentile with the long-term average (LTA), average monthly effluent limit (AMEL), and maximum daily effluent limit (MDEL). If the LTA, AMEL, and MDEL all exceed the mean, 95th percentile, and 99th percentile, it is feasible for the Discharger to comply with WQBELs. Based on this analysis and the comparisons in the following table, the Regional Water Board disagrees with the Discharger's assertion of infeasibility, and therefore, interim effluent limits for copper were not established in this Order.

	Mean vs. LTA	95 th vs. AMEL	99 th vs. MDEL	Feasible to Comply
Copper (WER = 2.4 , CTR)	5.71 < 6.9	7.9 < 8.3	8.81 < 11.4	Yes

b. **Cyanide.** For cyanide, the Discharger's self-monitoring data resulted in 2 detected values out of 49 samples. This small number of detected data precludes any meaningful statistical analysis for the purpose of feasibility determination. Since the maximum effluent concentration (MEC) of 5.5 μg/L exceeds the AMEL, as indicated in the following table, it is infeasible for the Discharger to immediately comply with final WQBELs for cyanide.

Pollutant	MEC	MDEL	AMEL	Feasible to Comply?
	μg/L	μg/L	μg/L	
Cyanide	5.5	1.0	0.42	No

2. Determination of Interim Effluent Limit. An interim effluent limit was derived for cyanide, because the Discharger showed infeasibility of complying with the final limitation and demonstrated that a compliance schedule is justified based on the Discharger's source control and pollution minimization efforts in the past and continued efforts in the present and future. The SIP requires that interim numeric effluent limitations for pollutants be based on either interim performance-based limitations or previous permit limitations, whichever is more stringent.

For cyanide, the limited detected values preclude any meaningful statistical evaluation of the Discharger's current treatment performance to determine a performance-based limitation. The previous permit did not contain a limitation for cyanide. Therefore, this Order establishes the Discharger's MEC of $5.5 \,\mu\text{g/L}$ as the interim maximum daily limitation.

3. Compliance Schedules.

- a. Pursuant to Section 2.1.1 of the SIP, "the compliance schedule provisions for the development and adoption of a TMDL only apply when: (a) the Discharger requests and demonstrates that it is infeasible for the Discharger to achieve immediate compliance with a CTR criterion; and (b) the Discharger has made appropriate commitments to support and expedite the development of the TMDL. In determining appropriate commitments, the Regional Water Board should consider the Discharger's contribution to current loadings and the Discharger's ability to participate in TMDL development." As further described in a finding below, the Discharger has requested and demonstrated that it is infeasible to achieve immediate compliance for cyanide.
- b. The SIP and the Basin Plan authorize compliance schedules in a permit if an existing Discharger cannot immediately comply with a new and more stringent effluent limitation. Compliance schedules for limitations derived from CTR WQC are based on Section 2.2 of the SIP, and compliance schedules for limitations derived from NTR or the Basin Plan WQOs are based on the Basin Plan. Both the SIP and the Basin Plan require the Discharger to demonstrate the infeasibility of achieving immediate compliance with the new limitation to qualify for a compliance schedule.

The SIP and Basin Plan require the following documentation to be submitted to the Regional Water Board to support a finding of infeasibility:

- Descriptions of diligent efforts the Discharger have made to quantify pollutant levels in the discharge, sources of the pollutant in the waste stream, and the results of those efforts.
- Descriptions of source control and/or pollutant minimization efforts currently under way or completed.
- A proposed schedule for additional or future source control measures, pollutant minimization, or waste treatment.
- A demonstration that the proposed schedule is as short as practicable.

The Basin Plan provides for a 10-year compliance schedule to implement measures to comply with new standards as of the effective date of those standards. This provision applies to the objectives adopted in the 2004 Basin Plan Amendment. Additionally, the provision authorizes compliance schedules for new interpretations of other existing standards if the new interpretation results in more stringent limitations.

- c. As previous described, the Discharger submitted the Infeasibility Study, and the Regional Water Board staff confirmed their assertions.
- d. This permit establishes compliance schedules until April 27, 2010, for cyanide. Since this compliance schedule is within the effective date of the permit, this Order includes final WQBELs.

During the compliance schedules, the Regional Water Board may take appropriate enforcement actions if the interim limit and requirements are not met.

F. Land Discharge Specifications – N/A

G. Reclamation Specifications – Marsh and Wetland Specifications

- 1. **Marsh Operation.** This requirement is retained from the previous permit, and is based on the Basin Plan, BPJ, and the need to operate the marsh in a way that preserves the wildlife habitat.
- 2. Marsh Management Plan. This Order requires the Discharger to implement, review, and update its Marsh Management Plan, and to notify the Regional Water Board of any modifications to this plan. This requirement is retained from the previous permit, and is based upon BPJ. Additionally, this Order requires continuous monitoring in portions of the marsh. This is because data from the period 2002 through 2005 indicate that pH variations have the potential to adversely affect aquatic life, and that dissolved oxygen may exhibit significant diurnal swings (while the Discharger only collects grab samples for dissolved oxygen, some of these samples exhibit supersaturation, which could be caused by excessive algal growth, and therefore, lead to a crash in dissolved oxygen levels in the early morning hours). Moreover, the Regional Water Board believes that only quarterly or monthly grab samples may miss the elevated fluctuations, and therefore, not indicate the actual impacts to the marsh aquatic life.

3. **Marsh Contingency Plan.** This provision requires the Discharger to implement, review, and update its Marsh Contingency Plan, and to notify the Regional Water Board staff of any modifications to this plan. This provision is unchanged from the previous permit and is based on the Basin Plan.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

- 1. Receiving Water Limitations V.A.1 through V.A.3 (conditions to be avoided). These limitations are in the previous permit and are based on the narrative/numerical objectives contained in Chapter 3 of the Basin Plan.
- 2. Receiving Water Limitations V.A.4 (compliance with State Law). This requirement is in the previous permit, requires compliance with Federal and State law, and is self-explanatory.

B. Groundwater - N/A

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 of 40 CFR requires all NPDES permits to specify recording and reporting of monitoring results. Sections 13267 and 13383 of the California Water Code authorize the Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program, Attachment E of this Order, establishes monitoring and reporting requirements to implement Federal and State requirements. The following provides the rationale for the monitoring and reporting requirements contained in the Monitoring and Reporting Program for this facility.

The principal purposes of a monitoring program by a discharger are to:

- 1) Document compliance with waste discharge requirements and prohibitions established by the Regional Water Board,
- 2) Facilitate self-policing by the discharger in the prevention and abatement of pollution arising from waste discharge,
- 3) Develop or assist in the development of limitations, discharge prohibitions, national standards of performance, pretreatment and toxicity standards, and other standards, and to
- 4) Prepare water and wastewater quality inventories.

The MRP is a standard requirement in almost all NPDES permits issued by the Regional Water Board, including this Order. It contains definitions of terms, specifies general sampling and analytical protocols, and sets out requirements for reporting of spills, violations, and routine monitoring data in accordance with NPDES regulations, the California Water Code, and Regional Water Board's policies. The MRP also contains a sampling program specific for this Facility. It defines the sampling stations and frequency, the pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all parameters for which effluent limitations are specified. Monitoring for additional constituents, for which no effluent limitations are established, is also required to provide data for future completion of RPAs for them.

- **A. Influent Monitoring.** This Order requires monitoring of the influent for the same parameters as those in the previous permit. This Order requires weekly monitoring for BOD, and TSS, to facilitate self-policing for the prevention and abatement of potential pollution arising in the effluent discharge.
- **B. Effluent Monitoring.** This Order requires monitoring at E-001 for conventional and toxic pollutants. This Order continues to require monitoring (at the same frequency as in the previous permit) of flow, pH, BOD₅, TSS, ammonia nitrogen, acute toxicity, and total coliform. This Order also requires monitoring of temperature, DO (and sulfides when DO < 2 mg/L), O&G, and hardness at the frequency specified in the MRP of this Order. This Order requires monthly monitoring of copper, cyanide, and mercury to demonstrate compliance with effluent limitations. This Order requires biannual monitoring of 2,3,7,8-TCDD and congeners, because the dioxin TEQ demonstrated reasonable potential to cause or contribute to exceedances of the narrative objective. This additional monitoring will complement the Clean Estuary Partnership's special dioxin project. This Order continues to require monitoring for all other priority pollutants (as specified in the August 6, 2001 Letter) to determine Reasonable Potential; however, the monitoring frequency was decreased because dischargers have collected a significant amount of baseline data and are now more in the process of collecting data to monitor the discharge for long term trends.
- **C.** Whole Effluent Toxicity Testing Requirements. This Order requires monthly monitoring of the acute toxicity testing with fathead minnow.

D. Receiving Water Monitoring

- 1. **Surface Water.** This Order continues to require monitoring of turbidity, pH, temperature, DO, Sulfides, un-ionized ammonia, and hardness at the Marsh (Monitoring Locations B-Weir, McN-A, McN-B, and McN-C) and at Peyton Slough (Monitoring Locations C-R, C-1, C-2, C-3, and C-4). This Order increased the monitoring frequency from quarterly to monthly because previous data indicated potential adverse affects upon aquatic organisms, and Regional Water Board staff believes that only quarterly grab samples may miss the diurnal or elevated fluctuations in these wetlands.
- 2. Groundwater N/A
- E. Other Monitoring Requirements N/A

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions (Provision A)

Standard Provisions, which in accordance with 40 CFR §§122.41 and 122.42, apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachments D and G of this Order.

B. Special Provisions (Provision C)

1. Reopener Provisions

These provisions are based on 40 CFR 123 and allow future modification of this Order and its effluent limitations as necessary in response to updated WQOs that may be established in

the future

2. Special Studies and Additional Monitoring Requirements

- a. **Effluent Characterization for Selected Constituents**: This provision is based on the Basin Plan and the SIP.
- b. **Ambient Background Receiving Water Study:** This provision is based on the Basin Plan and the SIP.
- c. **Optional Mass Offset**: This option is provided to encourage the Discharger to further implement aggressive reduction of mass loads to Suisun Bay.
- d. Status Report on 303(d)-Listed Pollutants, Site-Specific Objectives (SSOs) and TMDL: This provision, based on BPJ, requires the Discharger to continue its participation in the regional discharger-funded effort to develop SSOs and TMDL (Refer to provision 4 below).

3. Best Management Practices and Pollution Minimization

Pollutant Minimization Program: This provision is based on Chapter 4 of the Basin Plan and Sections 2.2.1 and 2.4.5 of the SIP. Furthermore, for cyanide, implementation of pollution minimization is required because a compliance schedule is granted.

4. Requirement to Support SSO and TMDL, and Assure Compliance Schedules with Final Limits

Maximum allowable compliance schedules are granted to the Discharger for dioxin-TEQ, cyanide, and copper because of the uncertainty in the time it takes to complete the TMDL and SSO for these pollutants. Therefore, it is appropriate to require the Discharger to participate and support the development of the TMDL and SSO. For cyanide, the requirement to submit a report of further measures to reduce this pollutant and assure compliance with the final limits should the SSO not be completed is based on the Basin Plan, Chapter 4 (Implementation of Effluent Limits, [F] Compliance Schedules). The Basin Plan states in part: "The primary goal in setting compliance schedules is to promote the completion of source control and waste minimization measures...Justification for compliance schedules will include...(c) a proposed schedule for additional source control measures or waste treatment." Should the cyanide SSO not be completed in time, the Discharger will need to reduce its discharge concentrations to meet the final WQBELs in this Order. As such, this requirement is necessary to identify additional steps for the Discharger to take to comply with the final limits specified in this Order.

5. **Copper Translator Study:** This Order includes final limits for copper based on default CTR criteria and a WER of 2.4 that was developed in studies to support a SSO for this pollutant. However, once the copper SSO is adopted, the Discharger's limits (AMEL=6.7, MDEL=9.2) will become more stringent. This is because the site-specific criteria in the copper SSO are more stringent than the default CTR criteria. Since the Discharger's current data suggests

that it cannot comply with these limits, this Order requires that the Discharger develop a site-specific translator.

6. Construction, Operation, and Maintenance Specifications

- a. **Wastewater Facilities, Review and Evaluation, Status Reports**: This provision is based on the previous permit and the Basin Plan.
- b. **Operations and Maintenance Manual, Review and Status Reports**: This provision is based on the Basin Plan, the requirements of 40 CFR 122, and the previous permit.
- c. **Contingency Plan, Review and Status Report**: This provision is based on the Basin Plan, the requirements of 40 CFR 122, and the previous permit.

7. Special Provisions for Municipal Facilities (POTWs Only)

- a. **Biosolids Management Practices Requirements**: This provision is based on the Basin Plan (Chapter 4) and 40 CFR 257 and 503.
- b. Sanitary Sewer Overflows and Sewer System Management Plan: This provision is to explain the Order's requirements as they relate to the Discharger's collection system, and to promote consistency with the State Water Resources Control Board adopted Statewide General Waste Discharge Requirements for Sanitary Sewer Overflow (SSO WDRs) and a related Monitoring and Reporting Program (Order No. 2006-0003-DWQ). The bases for these requirements are described elsewhere in this Fact Sheet for those requirements.

8. Other Special Provisions - None

VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for Mt. View Sanitary District. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the following: (a) paper and electronic copies of this Order were relayed to the Discharger, and (b) the Martinez News Gazette published a notice July 14, 2006, that this item would appear before the Board on September 13, 2006.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments should be submitted either in person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Regional Water Board, written comments should be received at the Regional Water Board offices by 5:00 p.m. on August 14, 2006.

C. Public Hearing

The Regional Water Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: September 13, 2006

Time: 9:00 am

Location: Elihu Harris State Office Building

1515 Clay Street, 1st Floor Auditorium

Oakland, CA 94612

Contact: Gayleen Perreira, (510) 622-2407, gperreira@waterboards.ca.gov

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our web address is http://www.waterboards.ca.gov/sanfrancisobay/ where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

State Water Resources Control Board Office of Chief Counsel P.O. Box 100, 1001 I Street Sacramento, CA 95812-0100

E. Information and Copying

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (510) 622-2300.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Gayleen Perreira at (510) 622-2407.